

SERVICE MANUAL

AA - 1A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-27XBR45	RM-Y127	US	SCC-H81A-A	KV-32XBR45	RM-Y127	US	SCC-H81B-A
KV-27XBR45	RM-Y127	<i>Canadian</i>	SCC-H82A-A	KV-32XBR45	RM-Y127	<i>Canadian</i>	SCC-H82B-A
KV-27XBR45M	RM-Y127	E	SCC-H83A-A	KV-32XBR85	RM-Y127	US	SCC-H81C-A

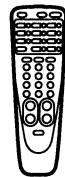
Note :

- Adjustment Manual for this model and Service Manual of MDR-IF210 are separately published.

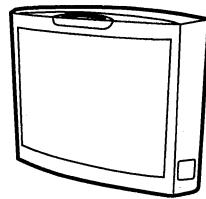
	Adjustment Manual	MDR-IF210 Service Manual
Part No.	9-965-064-01	9-959-113-11



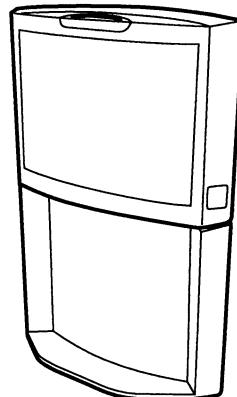
MDR-IF210



RM-Y127



KV-27XBR45
KV-27XBR45M
KV-32XBR45



KV-32XBR85



※ Please file according to model size... ■

TRINITRON® COLOR TV
SONY®

SPECIFICATIONS

Television system	American TV standards	Power consumption	When in use : 185 W (KV-27XBR45/27XBR45M)
Channel coverage	VHF : 2 - 13 UHF : 14 - 69 CATV : 1 - 125		195 W (KV-32XBR45) *195 W (KV-32XBR85)
Picture tube	Hi-Black™ Trinitron® tube 27-inch picture measured diagonally Trinitron® tube 32-inch picture measured diagonally		In standby : 5 W
Antenna	75-ohm external antenna terminal for VHF/UHF	Dimensions (W/H/D)	Active Super Woofer : 11 W (KV-32XBR85)
Input/output	VIDEO (3) 1 Vp-p, 75-ohms unbalanced, sync negative S VIDEO (1) Y : 1 Vp-p, 75-ohms unbalanced, sync negative C : 0.286 Vp-p (Burst signal), 75-ohms AUDIO (3) 500 m Vrms (100% modulation), Impedance : 47 kilohms AUDIO OUT (1) More than 900 m Vrms at the maximun volume setting (variable) More than 500 m Vrms (fix) Impedance : 5 kilohms Monitor out (1) Video (phone jack) : 1 Vp-p, 75-ohms unbalanced, sync negative Audio (phone jack) : 500 m Vrms (100% modulation) Impedance : 10 kilohms Loop out (1) mini jack (1) 15W x 2, 7.5 ohms)	Mass	KV-27XBR45/27XBR45M : 751.2 x 570.7 x 571.5 mm (49.3 x 22.3 x 22.3 in) KV-32XBR45 : 570.7 x 645.8 x 617.5 mm (22.3 x 25.2 x 24.1 in) KV-32XBR85 : 850.4 x 1144.6 x 696.4 mm (33.2 x 44.6 x 27.2 in) KV-27XBR45/27XBR45M : 53.7 kg (118.4 lbs)
Control S (IN/OUT)		Supplied accessories	KV-32XBR45 : 71.1 kg (156.7 lbs)
Speaker output			KV-32XBR85 : 90.6 kg (199.7 lbs)
Center Speaker			Remote Commander RM-Y127 (1)
Power requirements	16 W (NOR), 16 ohms, 30 W (MAX) 120 V AC, 60 Hz		Size AA (R6) batteries (3)
			Cordless stereo headphones
			MDR-IF210 (1)
			RCA audio cable (KV-32XBR85)
		Optional accessories	U/V mixer EAC-66
			Connecting cable
			VMC-810S/820S, VMC-720M,
			YC-15V/30V, RK-74A
			TV stand SU-27XBR4
			(KV-27XBR45 and 27XBR45M)
			TV stand SU-32XBR4
			(KV-32XBR45)

* Not including super woofer
Design and specifications are subject to change without notice.

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINT SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE DE ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANNAGE. LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE A L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE Δ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES CONTRENT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES remplacer que par des COMPOSANTS SONY dont le NUMÉRO DE PIÈCE EST INDICUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

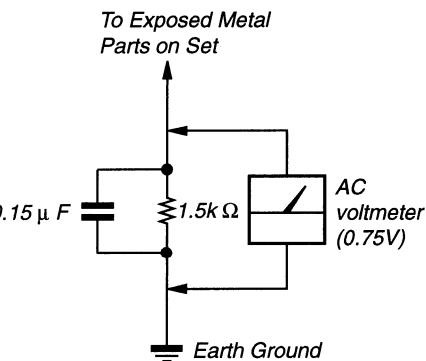


Fig. A. Using an AC voltmeter to check AC leakage.

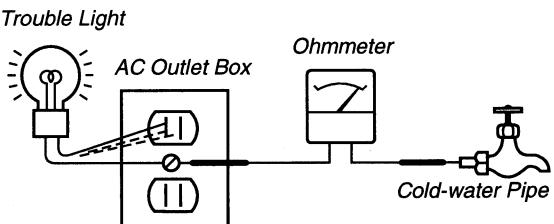


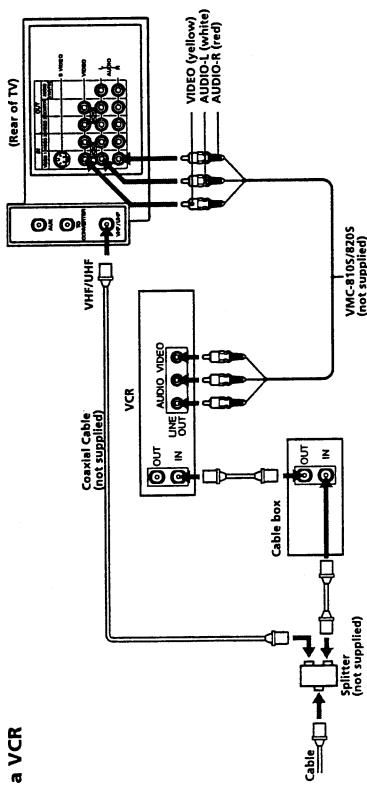
Fig. B. Checking for earth ground.

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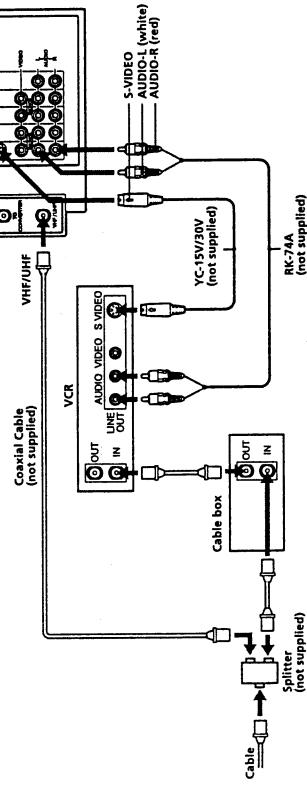
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With a cable box

To a VCR

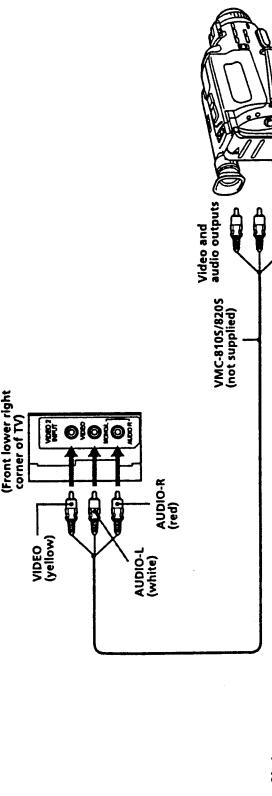


To an S video equipped VCR with a cable box



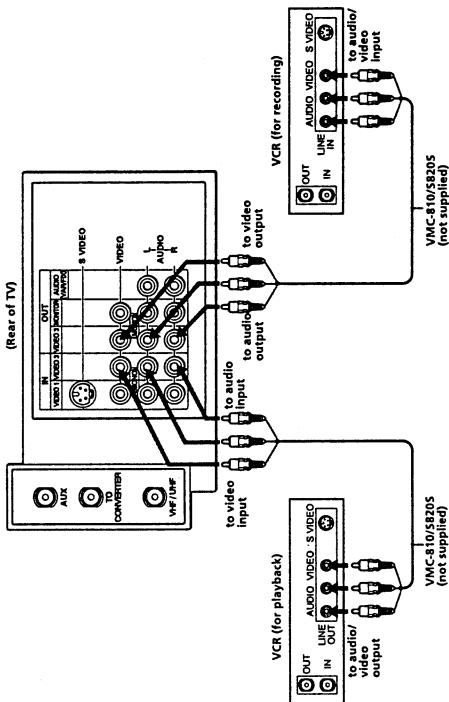
Connecting a camcorder

This connection is convenient for viewing a tape played by a camcorder.



Connecting two VCRs for tape editing using VIDEO 3 IN and OUT

Please note that VIDEO 3 OUT can only output a program from VIDEO 3 IN. During the above recording process you can view video sources from either antenna, cable, VIDEO 2 IN or VIDEO 1 IN jacks as well.

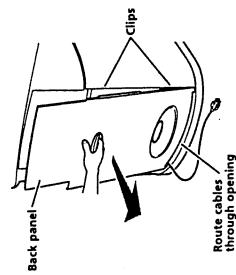


Connecting active super woofer

KV-32XBR85 only

This connection allows you to enjoy the sound of the active super woofer. If you connect an audio system to the active super woofer, you can enjoy the sound of the audio system and the active super woofer simultaneously.

The woofer volume varies according to the TV volume. Use the woofer control located in front of the active super woofer to adjust the intensity of the bass. Remove the back panel to access AUDIO/VIDEO jacks and AC cord. Replace the back panel when finished.

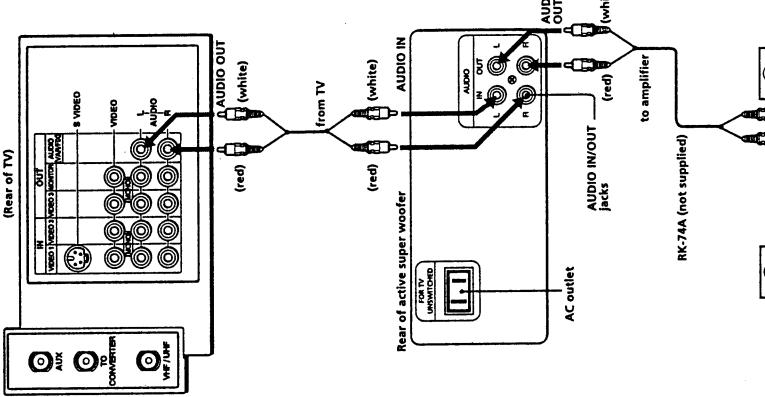


Notes

- If you do not use the TV for more than 20 seconds, the active super woofer is turned off automatically to save on power and consumption.
- When you release MUTING, the sound of the woofer is heard before that of the TV. This is normal.
- If you set SPEAKER to OFF in the AUDIO menu and select FIXED in the AUDIO OUT menu (page 25), the volume of the woofer may be excessive. We recommend that you set SPEAKER to ON when you use the active super woofer.
- You should only connect KV-32XBR85 to the AC outlet on the active super woofer.
- If you connect an audio system to the active super woofer, set the amplifier's function to INPUT.

Connecting two VCRs for tape editing using MONITOR OUT

MONITOR OUT allows you to record a program that is on the screen.

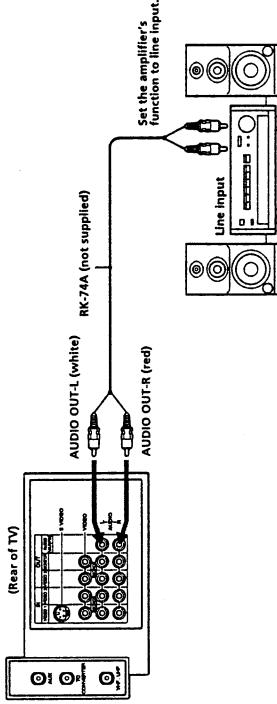


Notes

- Do not change the input signal while editing through MONITOR OUT, or the output signal will also change.
- When connecting a single VCR to the TV, do not connect the MONITOR OUT jacks at the rear of the TV to the VCR's line input, while at the same time connecting from the TV's VIDEO IN jacks to the VCR's line output, as shown above.
- You can use the S video jack to connect a VCR for playback and the AUDIO/VIDEO jack to connect a VCR for recording.

Connecting an audio system

When connecting audio equipment, see Page 24 and 25 for more information.



Using the TV speakers as center speakers

This feature allows you to enjoy the benefits of Dolby Pro Logic by using the speakers of the center speaker. To utilize this system you must have an amplifier that is Dolby Pro Logic compatible. Connect the speaker wires from the amplifier's center channel output terminals to the TV's CENTER SPEAKER IN terminals. Both right and left terminals must be connected to receive an audio signal. After making the above connections select "SPEAKER : CENTER" from the AUDIO menu (page 22). The left and right audio channels can be heard through your audio system speakers. Please note that in this set up the volume can only be adjusted by your amplifier.

Notes

- Always match the speaker cord and terminal colors when making the connections.
- Unplug the TV when making the connections. If the exposed speaker cord wires touch while the TV is plugged in, the TV may short-circuit and be damaged.
- Do not pull on the speaker cords.
- Always turn off the amplifier power before connecting to CENTER SPEAKER IN.
- Always match the speaker cord and terminal colors when making the connection.

Notes

- Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590. "Dolby" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Step 3: Installing the glass door and adjusting the shelf

Note
The glass door in this stand is made of tempered glass. Although it is more shock-resistant than ordinary glass, tempered glass may shatter if it is dropped or receives a sudden shock.

Adjusting the shelf

- 1 Unlock the four shelf supports with a medium Phillips head screwdriver.

KV-32XBR85 only

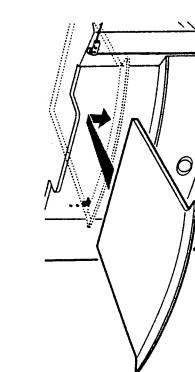
Follow these instructions to install the glass door and adjust the shelf.

Installing the glass

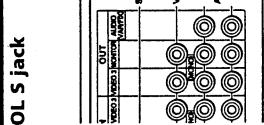
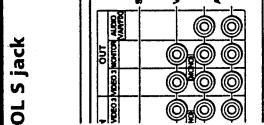
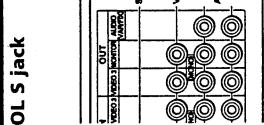
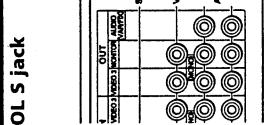
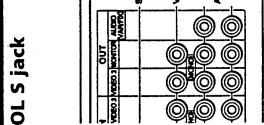
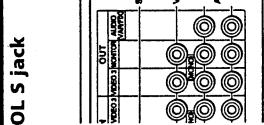
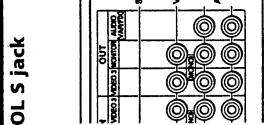
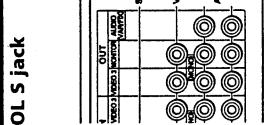
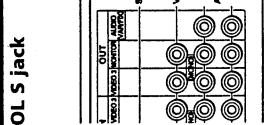
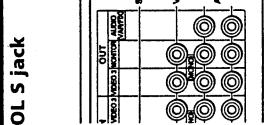
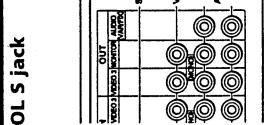
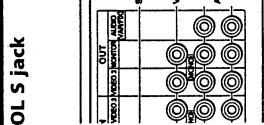
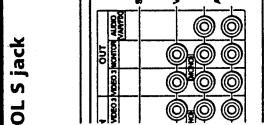
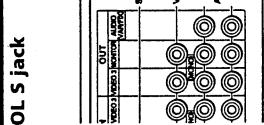
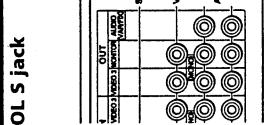
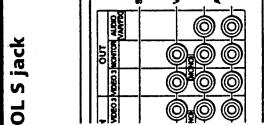
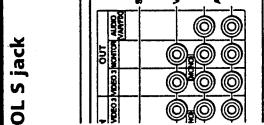
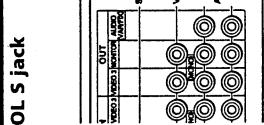
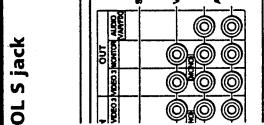
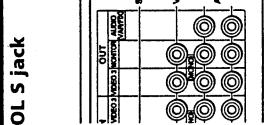
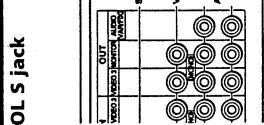
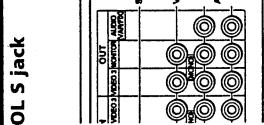
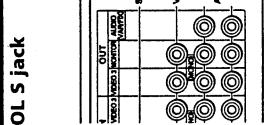
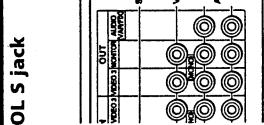
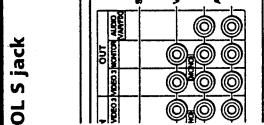
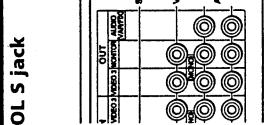
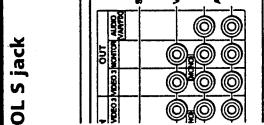
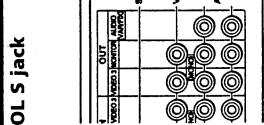
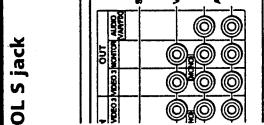
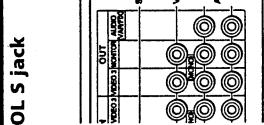
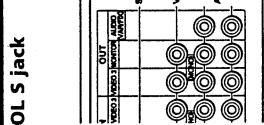
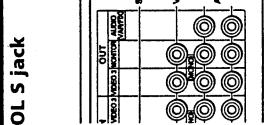
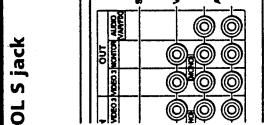
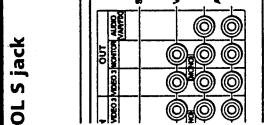
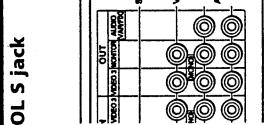
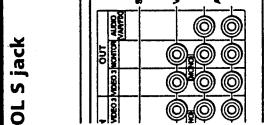
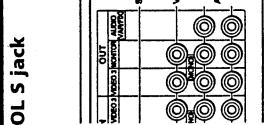
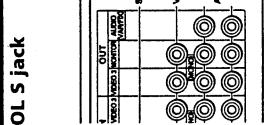
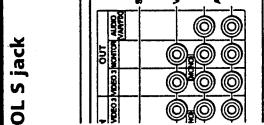
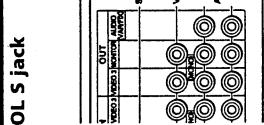
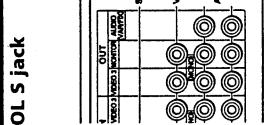
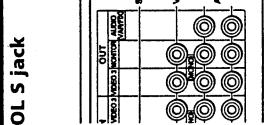
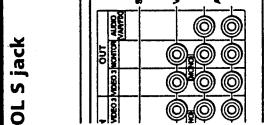
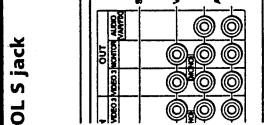
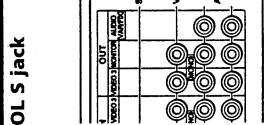
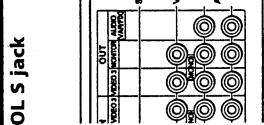
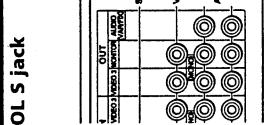
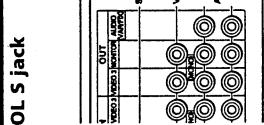
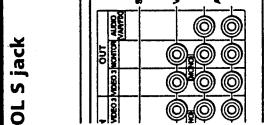
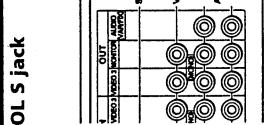
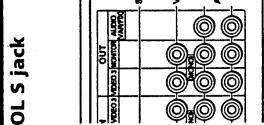
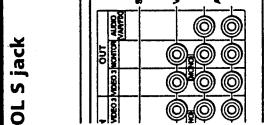
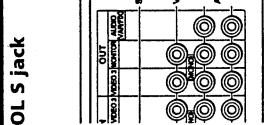
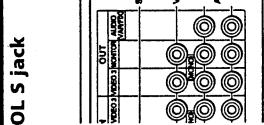
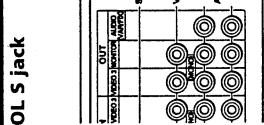
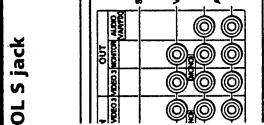
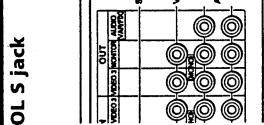
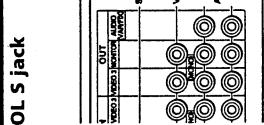
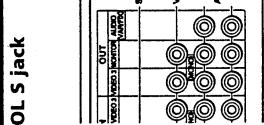
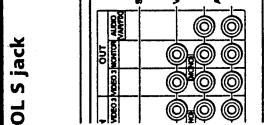
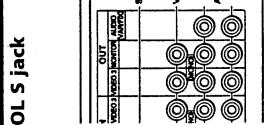
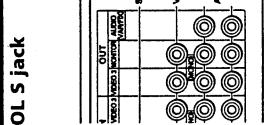
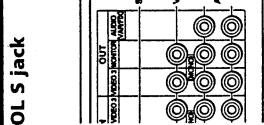
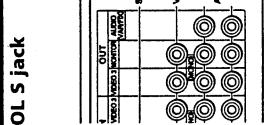
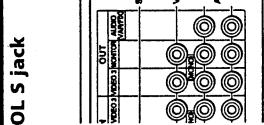
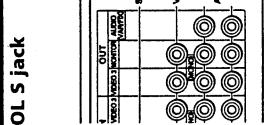
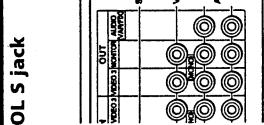
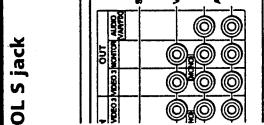
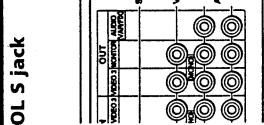
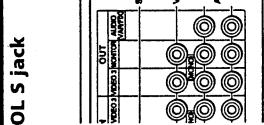
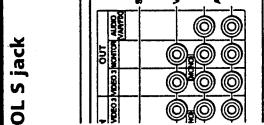
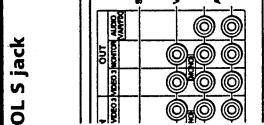
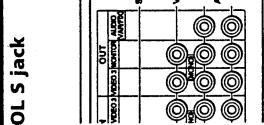
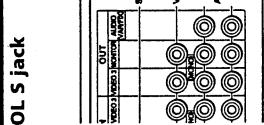
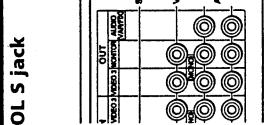
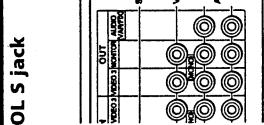
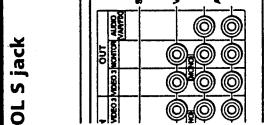
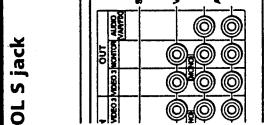
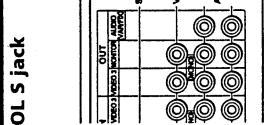
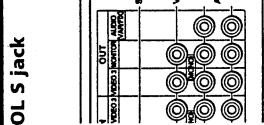
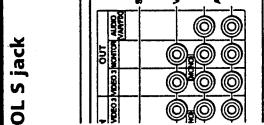
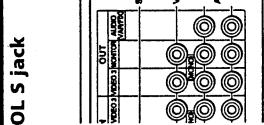
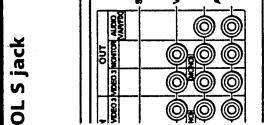
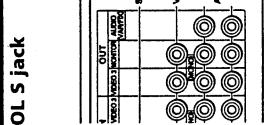
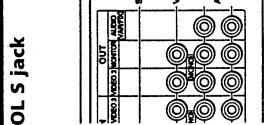
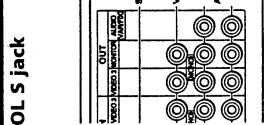
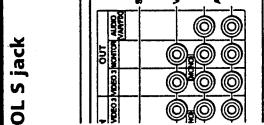
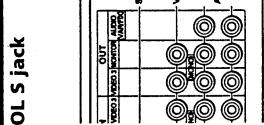
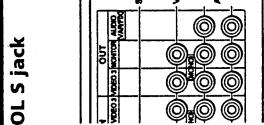
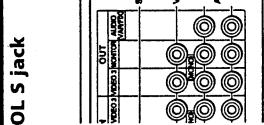
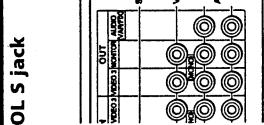
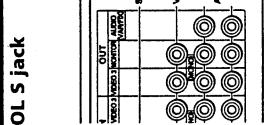
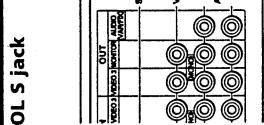
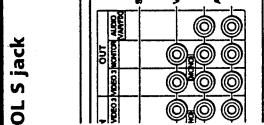
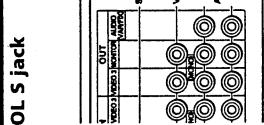
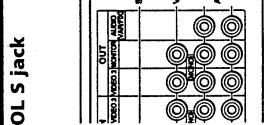
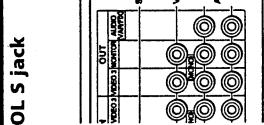
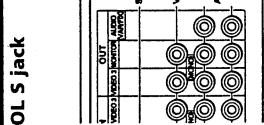
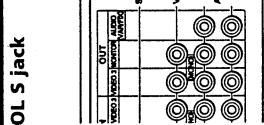
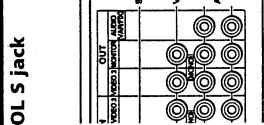
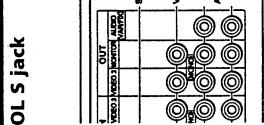
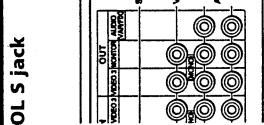
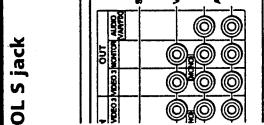
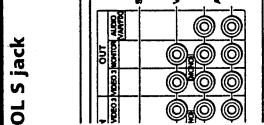
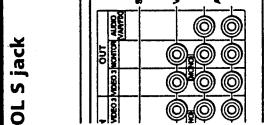
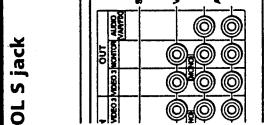
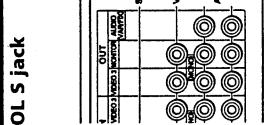
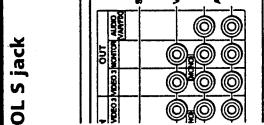
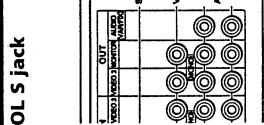
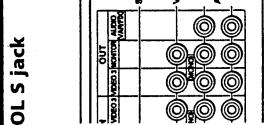
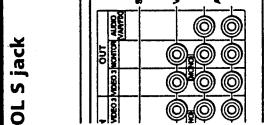
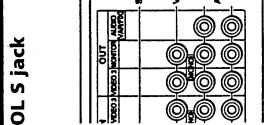
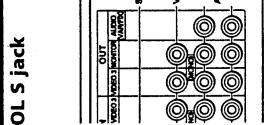
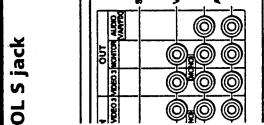
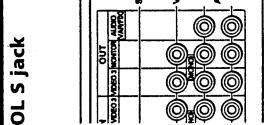
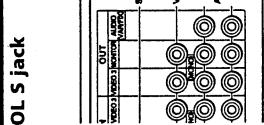
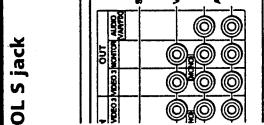
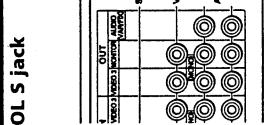
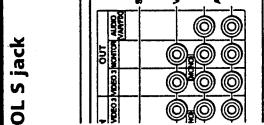
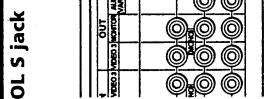
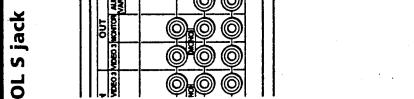
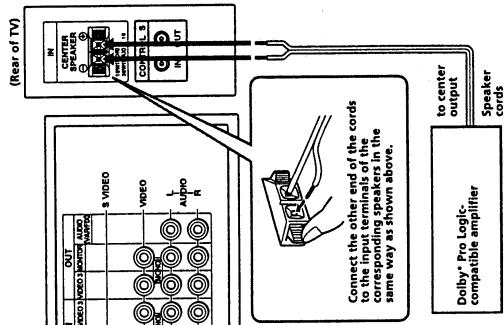
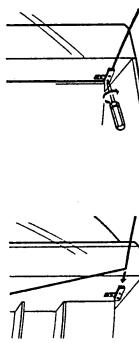
- 1 Attach the top hinge to the right side of the glass door, tighten the screws snugly, but do not overtighten. Attach the plate pad to the left side and push the plate over the plate pad.



- 2 Gently slide the shelf up and out.
- 3 Insert shelf supports in the appropriate holes. Slide shelf in, align the shelf grooves with the shelf supports, and slide the shelf down.



- 2 Insert the bottom hinge into the bushing located at the bottom, right side of the cabinet.
- 3 Push the top, glass door hinge into the top, right bushing and gently slide the glass door into the bottom hinge. Adjust the glass door until level, and tighten the hinge screws.



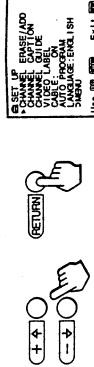
Step 5: Changing the menu language

Presetting channels

You can preset TV channels easily by using the AUTO PROGRAM feature. Preset channels on the day rather than late at night, since some channels go off the air and will not be present.

You do not have to do this procedure if you execute AUTO SET UP (page 14). Do this procedure only when you want to set channels manually.

- 1 Press MENU.
- 2 Press + or - to move the cursor (►) to SET UP and press RETURN.
- 3 Press + or - to move the cursor (►) to AUTO PROGRAM and press RETURN.



- 4 Press + or - to move the cursor (►) to AUTO PROGRAM and press RETURN.
- 5 Press MENU to return to the original screen.

"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed.

- Notes
 - If you are in one of the video modes, the AUTO PROGRAM lettering will be black on the menu. To display the AUTO PROGRAM lettering you must press the TV/VIDEO or TV button until a channel number appears.
 - In case of using the AUX connector, AUTO PROGRAM is also available for the AUX input. Press the TV button on the remote commander first and make sure that "AUX" is displayed beside the channel number on the screen. Then follow steps 1 to 3 above.
- 6 Press MENU to return to the original screen.

- Note**
• Certain parts of the ESPAÑOL and FRANCAIS menus remain in English.

Watching two programs at the same time - PIP and P&P

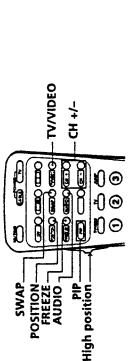
If you prefer Spanish or French to English, you can change the menu language. You do not have to do this procedure if you execute AUTO SET UP (page 14). Do this procedure only when you want to set it manually.

- 1 Press MENU.
- 2 Press + or - to move the cursor (►) to SET UP and press RETURN.
- 3 Press + or - to move the cursor (►) to LANGUAGE and press RETURN.
- 4 Press + or - to select ESPAÑOL or FRANCAIS and press RETURN.
- 5 Press MENU to return to the original screen.

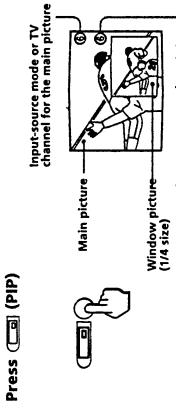
Notes

- If you are in one of the video modes, the AUTO PROGRAM lettering will be black on the menu. To display the AUTO PROGRAM lettering you must press the TV/VIDEO or TV button until a channel number appears.
- In case of using the AUX connector, AUTO PROGRAM is also available for the AUX input. Press the TV button on the remote commander first and make sure that "AUX" is displayed beside the channel number on the screen. Then follow steps 1 to 3 above.

You can watch the main/right picture and a window/left picture simultaneously using the Picture-in-Picture or the Picture-and-Picture (Twin View™) feature.



Displaying a window picture - PIP



- Press (PIP).
- Input-source mode or TV channel for the main picture
- Main picture
- Window picture (1/4 size)
- Input-source mode or TV channel for the window picture

Each time you press (PIP), the size of the window picture changes as follows: 1/4 size → 1/9 size → 1/16 size.

To remove the window picture, press OFF.

- Notes**
- If the main picture is not receiving an image, the right picture may be in black and white.
 - The window picture may be affected by the condition of the left picture.
 - You can listen to the window picture's sound through the AUDIO OUT (VAR/FIX) jacks.

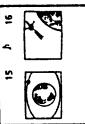
Displaying a left picture - P&P



To restore the normal picture, press OFF.

Adjusting the picture (VIDEO)

Freezing the TV screen



PIP function

Notes

- If one of the pictures is not receiving an image, the other picture may appear in black and white.
- One picture may be affected by the condition of the other picture.

Picture from a cooking program, a displayed address or a phone number and so on.

Changing the input mode

Press TV/VIDEO in the PIP control area to select the input mode.

Each time you press TV/VIDEO, "VIDEO 1," "VIDEO 2," and "VIDEO 3" appear in sequence.

PIP function

The PIP or P&P picture will appear in the same input mode as the last time you used PIP or P&P.

Press AUDIO.

The \downarrow display appears for a few seconds, indicating that the main/right or window/left picture sound is being received.

PIP function

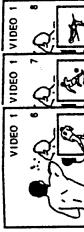
To restore the main picture sound, press AUDIO again.

To restore the other screen picture sound, press AUDIO again.

Changing TV channels in the main/right or window/left picture.

Press CH +/– in the PIP remote control area.

PIP feature



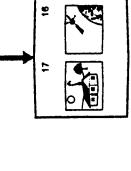
P&P feature

CH +/– in the PIP remote control area only controls the left screen picture.

PIP feature



P&P feature



Changing the position of the PIP window picture.

Press POSITION.

Each time you press POSITION, the window picture will move counterclockwise on the screen.

PIP function

To restore the main picture sound, press AUDIO again.

Freezing the TV screen

This feature is useful when you want to write down a recipe from a cooking program, a displayed address or a phone number and so on.

Press FREEZE.



To restore the normal screen, press FREEZE again.



Notes

- If using PIP, the frozen TV screen window will appear opposite the PIP window picture.
- If using P&P, both screens will freeze when you press FREEZE.

Swapping the window/left pictures (PIP) or the main/right pictures (P&P)

Press SWAP.

Each time you press SWAP, the picture screens and sound will switch places.

PIP feature



P&P feature



PIP feature



P&P feature



2 Make sure the cursor (*) is beside VIDEO and press RETURN.



3 Select the item you want to adjust.



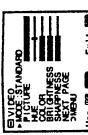
For example:

(1) To adjust brightness, press \uparrow or \downarrow to select BRIGHTNESS and,

Note

The channels being received through the AUX jack cannot be displayed as a window picture.

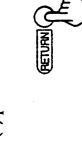
20 | Operations



You can adjust the picture setting of TV programs to your preferences by following the instructions below. These adjustments can also be made for your video input programs. The TV program settings and video program settings are stored separately.



1 Press MENU.



Note

The channels being received through the AUX jack cannot be displayed as a window picture.

* POSITION is not a P&P feature.

Operations | 19

Adjusting the sound (AUDIO)

- 4 Adjust the selected item:**
(1) Press + or - to adjust the item and, press RETURN.
- 5 Press + or - to select TRINITONE and NTSC STD and press RETURN.**
- (2) The new setting appears in the VIDEO menu.**
- 4 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 5 Press + or - to select VM (velocity modulation) ON or OFF.**
- Setting VM (velocity modulation) ON or OFF**
- Velocity modulation improves picture definition and contrast ratio for an overall sharper picture. The factory setting for VM is ON. Select OFF to restore the normal picture setting.
- 1 Press MENU.**
- 2 Press + or - to select VIDEO and press RETURN.**
- 3 Press + or - to select NEXT PAGE and press RETURN.**
- 4 Press + or - to select VM and press RETURN.**
- 5 Press + or - to select YES, or NO and press RETURN.**
- 6 Press + or - to select VIDEO and press RETURN.**
- 7 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 8 Press + or - to select VM (velocity modulation) ON or OFF.**
- Setting VM (velocity modulation) ON or OFF**
- Velocity modulation improves picture definition and contrast ratio for an overall sharper picture. The factory setting for VM is ON. Select OFF to restore the normal picture setting.
- 1 Press MENU.**
- 2 Press + or - to select VIDEO and press RETURN.**
- 3 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 4 Press + or - to select VM and press RETURN.**
- 5 Press + or - to select YES, or NO and press RETURN.**
- 6 Press + or - to select VIDEO and press RETURN.**
- 7 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 8 Press + or - to select VM (velocity modulation) ON or OFF.**
- Setting NR (picture noise reduction) ON or OFF**
- This setting allows you to filter out screen picture noise. ON reduces the picture noise and OFF restores the normal picture.
- 1 Press MENU.**
- 2 Press + or - to select VIDEO and press RETURN.**
- 3 Press + or - to select NEXT PAGE and press RETURN.**
- 4 Press + or - to select NR and press RETURN.**
- 5 Press + or - to select YES, or NO and press RETURN.**
- 6 Press + or - to select VIDEO and press RETURN.**
- 7 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 8 Press + or - to select VM (velocity modulation) ON or OFF.**
- Setting NR (picture noise reduction) ON or OFF**
- This setting allows you to filter out screen picture noise. ON reduces the picture noise and OFF restores the normal picture.
- 1 Press MENU.**
- 2 Press + or - to select VIDEO and press RETURN.**
- 3 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 4 Press + or - to select NR and press RETURN.**
- 5 Press + or - to select YES, or NO and press RETURN.**
- 6 Press + or - to select VIDEO and press RETURN.**
- 7 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 8 Press + or - to select VM (velocity modulation) ON or OFF.**
- Setting BASS**
- For example:
(1) To adjust bass, press + or - to select BASS and
- 1 Press MENU.**
- 2 Press + or - to select AUDIO and press RETURN.**
- 3 Select the item you want to adjust.**
- 4 Press + or - to select BASS and press RETURN.**
- 5 Press + or - to select YES, or NO and press RETURN.**
- 6 Press + or - to select VIDEO and press RETURN.**
- 7 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 8 Press + or - to select VM (velocity modulation) ON or OFF.**
- Setting BASS**
- For example:
(1) To adjust bass, press + or - to select BASS and
- 1 Press MENU.**
- 2 Press + or - to select AUDIO and press RETURN.**
- 3 Select the item you want to adjust.**
- 4 Press + or - to select BASS and press RETURN.**
- 5 Press + or - to select YES, or NO and press RETURN.**
- 6 Press + or - to select VIDEO and press RETURN.**
- 7 Press + or - to select HIGH, MEDIUM, or LOW position.**
- 8 Press + or - to select VM (velocity modulation) ON or OFF.**
- Setting BASS**
- (continued)**

Setting the speakers (SPEAKER)

You may switch off the TV speakers when, for example, you want to listen to the sound through a stereo system.

If you use the TV speakers as center speakers and connect a Dolby Pro Logic-compatible amplifier to CENTER SPEAKER IN, after making the connections display the mode set menu and set SPEAKER to "CENTER."



1 Press MENU.

2 Press + or - → to select AUDIO and press RETURN.

3 Press + or - → to select MTS and press RETURN.

4 Press + or - → to select MAIN, SAP, or MONO and press RETURN.

5 Press + or - → to select SURROUND and press RETURN.

6 Press + or - → to select ON and press RETURN.

7 Press + or - → to select OFF and press RETURN.

8 Press + or - → to select STEREO and press RETURN.

9 Press + or - → to select CENTER or OFF.

10 Press + or - → to select SAP and press RETURN.

11 Press + or - → to select MONO and press RETURN.

12 Press + or - → to select STEREO and press RETURN.

13 Press + or - → to select SAP and press RETURN.

14 Press + or - → to select MONO and press RETURN.

Note

- Stereo and SAP sounds are subject to program sources. Refer to your local TV program listings.
- To turn the speakers off, change SPEAKER from ON to OFF in the AUDIO menu.

Selecting stereo or bilingual programs (MTS)

The Multichannel TV Sound (MTS) feature gives you the choice to enjoy stereo sound or Second Audio Programs (SAP) when available. The factory setting is stereo sound (MAIN).

1 Press MENU.

2 Press + or - → to select AUDIO and press RETURN.

3 Press + or - → to select MTS and press RETURN.

4 Press + or - → to select MAIN, SAP, or MONO and press RETURN.

5 To adjust other items, repeat steps 3 and 4 above.

Description of adjustable items

Item	Press + & to	Press - & to
TREBLE	Increase the treble response	Decrease the treble response
BASS	Increase the bass response	Decrease the bass response
BALANCE	Emphasize the right speaker's volume	Emphasize the left speaker's volume

To restore the factory settings

Press RESET while the AUDIO menu is displayed.

Note

- When SPEAKER (page 24) is CENTER and AUDIO OUT (page 25) is in FIXED condition, the sound is set to mid-level and it cannot be adjusted through your TV set.

1 Press MENU.

2 Press + or - → to select AUDIO and press RETURN.

3 Press + or - → to select MTS and press RETURN.

4 Press + or - → to select ON and press RETURN.

5 Press + or - → to select OFF and press RETURN.

6 Press + or - → to select STEREO and press RETURN.

7 Press + or - → to select SAP and press RETURN.

8 Press + or - → to select MONO and press RETURN.

9 Press + or - → to select STEREO and press RETURN.

10 Press + or - → to select SAP and press RETURN.

11 Press + or - → to select MONO and press RETURN.

12 Press + or - → to select STEREO and press RETURN.

13 Press + or - → to select SAP and press RETURN.

14 Press + or - → to select MONO and press RETURN.

Listening to surround sound (SURROUND)

SURROUND feature simulates sound reproduction with the atmosphere of a movie theater or a concert hall. Surround sound only works with stereo programs.

1 Press MENU.

2 Press + or - → to select AUDIO and press RETURN.

3 Press + or - → to select SURROUND and press RETURN.

4 Press + or - → to select ON and press RETURN.

5 Press + or - → to select OFF and press RETURN.

6 Press + or - → to select STEREO and press RETURN.

7 Press + or - → to select SAP and press RETURN.

8 Press + or - → to select MONO and press RETURN.

9 Press + or - → to select STEREO and press RETURN.

10 Press + or - → to select SAP and press RETURN.

11 Press + or - → to select MONO and press RETURN.

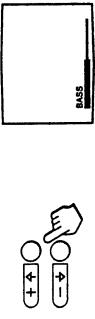
12 Press + or - → to select STEREO and press RETURN.

13 Press + or - → to select SAP and press RETURN.

14 Press + or - → to select MONO and press RETURN.

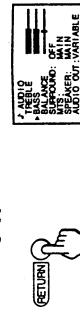
4 Adjust the selected item:

- (1) Press + or - → to adjust the item and,



(2) Press RETURN.

The new setting appears in the AUDIO menu.



5 To adjust other items, repeat steps 3 and 4 above.

1 Press MENU.

2 Press + or - → to select AUDIO and press RETURN.

3 Press + or - → to select SURROUND and press RETURN.

4 Press + or - → to select ON and press RETURN.

5 Press + or - → to select OFF and press RETURN.

6 Press + or - → to select STEREO and press RETURN.

7 Press + or - → to select SAP and press RETURN.

8 Press + or - → to select MONO and press RETURN.

9 Press + or - → to select STEREO and press RETURN.

10 Press + or - → to select SAP and press RETURN.

11 Press + or - → to select MONO and press RETURN.

Note

- To your local TV program listings.
- To turn the speakers off, change SPEAKER from ON to OFF in the AUDIO menu.

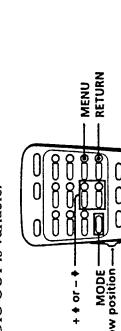
Note

- Stereo and SAP sounds are subject to program sources. Refer to your local TV program listings.
- To turn the speakers off, change SPEAKER from ON to OFF in the AUDIO menu.

Setting audio out (AUDIO OUT)

This setting allows you to select either a fixed or variable audio output. Fixed audio output means that you cannot adjust the volume and sound characteristics through your TV set. Variable output means that you can adjust the volume, bass, treble and balance through your TV set.

If SPEAKER is CENTER or OFF, AUDIO OUT can either be fixed or variable; however, if the SPEAKER is ON, AUDIO OUT is variable.



1 Follow steps 1-4 in "Setting the speakers" on page 24 to set the speakers to CENTER and press RETURN.



2 Press + or - to select AUDIO OUT and press RETURN.



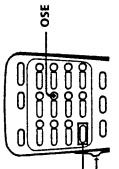
3 Press + or - to select VARIABLE or FIXED and press RETURN.



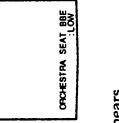
Note
• If SPEAKER is ON, AUDIO OUT will appear in black and you will be unable to adjust AUDIO OUT.
• OSF may also be output through audio out.

Listening to orchestra seat effect sound—OSE

Orchestra Seat Effect™ (OSE) feature restores the harmonic balance of the sound to dramatically improve the overall reproduction of programs. It gives the sound more clarity, depth, and definition, making the sound more dynamic.



Press OSE.
"ORCHESTRA SEAT BBE: LOW" appears on the screen.



Press OSE again.
"ORCHESTRA SEAT BBE: HIGH" appears.



We recommend LOW setting for news programs and HIGH setting for music, sports, video games and movies.
For the best sound quality, we recommend that AUDIO to be set at factory setting when OSE is set to ON.
• Orchestra Seat™ Effect™ (OSE) feature restores the harmonic balance of the sound to dramatically improve the overall reproduction of programs.
• Orchestra Seat™ Effect is using BBE technology under licence from BBE sound Inc.

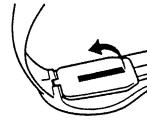
Note
• If SPEAKER is ON, AUDIO OUT will appear in black and you will be unable to adjust AUDIO OUT.
• OSF may also be output through audio out.

Listening with the cordless stereo headphones

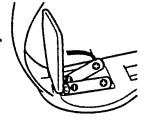
Setting up the headphones

Install the supplied batteries into the headphones.

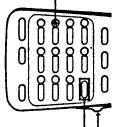
(1) Open the battery compartment lid by pressing on the lid as illustrated.



Press VOL.
"VIDEO 1" appears on the screen.



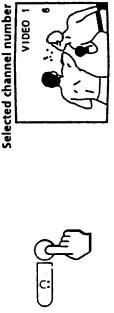
Battery life
When used continuously, the batteries will last:
— up to 80 hours with size AA (R6) alkaline batteries or
Replace both batteries with new ones when the sound deteriorates.



Notes

- The sound characteristics heard through the headphones cannot be modified in the same manner as the sound characteristics heard through the TV's speakers.
- Treble, bass and balance settings are fixed. Surround, OSE and muting features are not available.
- After you have finished listening with the headphones, it is recommended that you remove the headphones from your head before pressing C (headphones). Otherwise noise will be heard through the headphones.
- To prevent hearing damage due to sudden or prolonged excessive volume, do not raise the headphones' volume too high while listening.

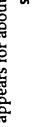
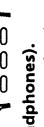
1 Press C (headphones).
The C display appears for about three seconds.



Operations | 25

To turn off the headphones

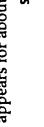
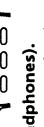
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

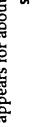
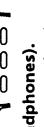
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To improve sound reception

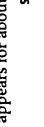
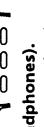
• Do not cover the infrared transmitter on the TV.
• Do not cover the infrared sensors on the headphones.



Operations | 26

To turn off the headphones

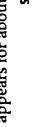
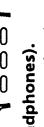
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

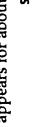
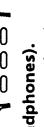
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

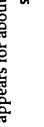
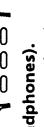
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

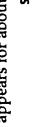
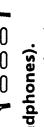
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Operations | 26

To turn off the headphones

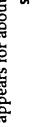
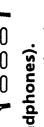
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

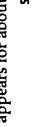
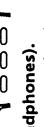
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

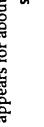
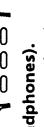
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

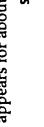
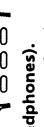
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

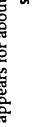
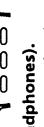
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

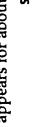
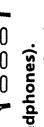
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

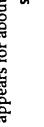
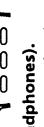
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

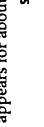
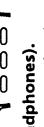
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

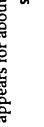
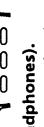
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

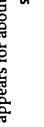
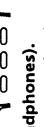
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

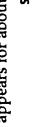
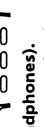
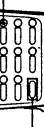
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

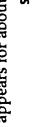
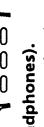
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

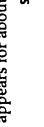
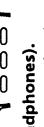
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the TV's speaker

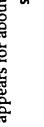
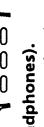
Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

To turn off the headphones

Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).



Operations | 26

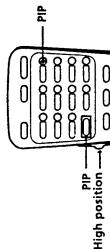
To turn off the TV's speaker

Press VOL. — until the sound disappears, or set SPEAKER to CENTER (see "Setting the speakers," page 24).

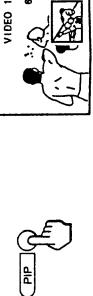


Listening to sound from a main/right (PIP) and window/left (P&P) picture

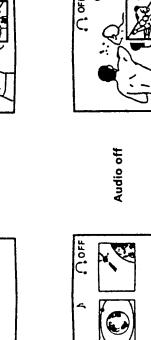
Follow these instructions to select the audio source that you want to receive through the cordless headphones (main, window picture). If you want to listen to sound from the window picture, make sure that the sound from the window picture is being received.



- 1 Press (PIP) or (P&P) to display a main/right or window/left picture.



- 2 Press (headphones). Each time you press , the audio source changes to main picture, window picture and "OFF" in sequence. The display appears with the input mode.



Note

- The settings for these modes can be adjusted in the VIDEO menu. They will remain set unless the RESET button is pressed.
- If you use the headphones at too great a distance from the transmitter, you may hear a hissing noise, and if there is an object between the headphones and the transmitter, the sound may be interrupted. These phenomena are inherent to infrared ray communication. They do not indicate a problem with the unit, itself.

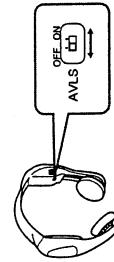
Notes

- If you turn the PIP or P&P function off, the sound from the cordless headphones changes to the main picture sound.
- If you turn the TV off, the next time you turn the TV on, the headphones will be off.

AVLS (Automatic Volume Limiter (System) Function

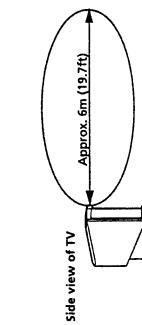
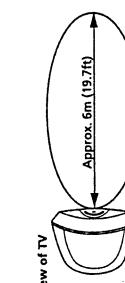
The AVLS switch on the headphones' headband allows you to limit the maximum volume of your headphones.

- When the AVLS switch is set to the ON position, the volume will be kept at a moderate level.
- When the AVLS switch is set to the OFF position, you will be able to enjoy the full volume capability of your headphones.



Coverage area of the infrared rays

The diagrams illustrate the approximate area covered by the infrared rays emitted from the transmitter.



Note

- The settings for these modes can be adjusted in the VIDEO menu. They will remain set unless the RESET button is pressed.

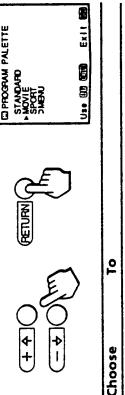
Selecting the program palette mode (PROGRAM PALETTE)

The PROGRAM PALETTE feature allows you to choose three different modes of picture settings. Choose the one that best suits the type of program that you want to watch.

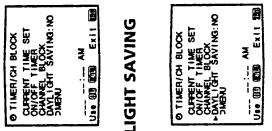
- 1 Press MENU.
- 2 Press + or - to select PROGRAM PALETTE and press RETURN.



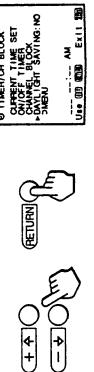
- 3 Press + or - to select STANDARD, MOVIE, or SPORTS mode and press RETURN.



- 1 Press MENU.
- 2 Press + or - to select TIMER/CH BLOCK and press RETURN.

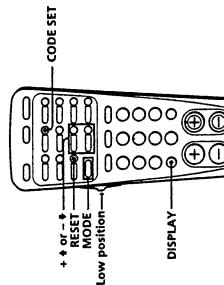


- 3 Press + or - to select DAYLIGHT SAVING and press RETURN.

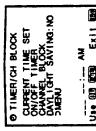


Setting daylight savings (DAYLIGHT SAVING)

Activate DAYLIGHT SAVING if you are currently using Daylight Saving Time, or deactivate if you are using Standard Time. Using the DAYLIGHT SAVING feature will automatically adjust all time-related settings (CURRENT TIME, ON/OFF TIMER and CHANNEL BLOCK). DAYLIGHT SAVING should be set before using the CURRENT TIME SET functions (page 29).



- 1 Press MENU.
- 2 Press + or - to use the CURRENT TIME SET functions.



- 3 Press + or - to use the DAYLIGHT SAVING menu.

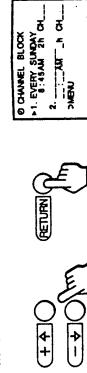


Setting up favorite channels (CHANNEL GUIDE)

6 Set the time that you want to start blocking the channel as you did the day.

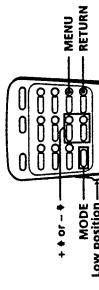


7 Press + or - to set the length of the program (1 to 12 hours) and press RETURN. For example, to block a channel for 2 hours, set the duration to "2".



8 Press + or - to set the channel that you want to block and press RETURN.

When you press RETURN, the timer is set and the TIMER indicator on the front of the TV lights up.



1 Press MENU.

2 Press + or - to select TIMER/CH BLOCK and press RETURN.

3 Press + or - to select CHANNEL BLOCK and press RETURN.

Repeat steps 4 - 7 to set the second timer.

When the time you set comes, the TV will turn on. (If the TV is already turned on, the TV screen changes to the channel you set.) Before the timer goes off, the message "TV will turn off" appears for one minute and then the TV turns off.

4 Press RETURN to display default setting "EVERY SUN - SAT".



5 Press + or - to select the days you want to block the channel and press RETURN.

Each time you press +, the days cycle as shown below. If you press -, the days cycle in reverse order.

EVERY SUN - SAT	SUNDAY
EVERY MONDAY	MONDAY
EVERY SUNDAY	SATURDAY

To change the timer setting

Set the new day and time following the procedure on the previous page. The previous setting is erased.

To cancel the timer
Press RESET while the ON/OFF TIMER menu is displayed. The TIMER indicator on the front of the TV goes out.

(continued)

Blocking out a channel (CHANNEL BLOCK)

6 Press + or - to set the start time and press RETURN.



7 Press + or - to set the length of the program (1 to 6 hours) and press RETURN. For example, to have the TV turn off after 3 hours, set the duration to "3".



8 Press + or - to set the channel that you want to watch and press RETURN.

When you press RETURN, the timer is set and the TIMER indicator on the front of the TV lights up.



1 Press MENU.

2 Press + or - to select TIMER/CH BLOCK and press RETURN.

3 Press + or - to select CHANNEL BLOCK and press RETURN.

Repeat steps 4 - 7 to set the second timer.

When the time you set comes, the TV will turn on. (If the TV is already turned on, the TV screen changes to the channel you set.) Before the timer goes off, the message "TV will turn off" appears for one minute and then the TV turns off.

4 Press RETURN to display default setting "EVERY SUN - SAT".



5 Press + or - to select the days you want to block the channel and press RETURN.

Each time you press +, the days cycle as shown below. If you press -, the days cycle in reverse order.

EVERY SATURDAY	SUNDAY
EVERY MONDAY	MONDAY
EVERY SUNDAY	SATURDAY

To change the timer setting

Set the new day and time following the procedure on the previous page. The previous setting is erased.

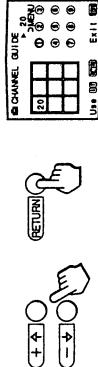
To cancel the timer
Press RESET while the ON/OFF TIMER menu is displayed. The TIMER indicator on the front of the TV goes out.

Setting captions to channels (CHANNEL CAPTION)

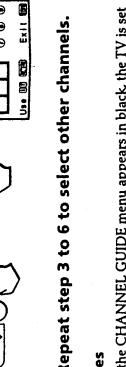
6 Press + or - to select a channel position and press RETURN.



7 Press + or - to select the channel and press RETURN.



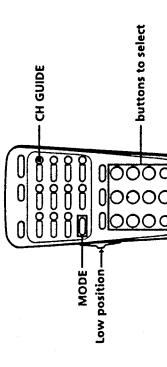
You can add a caption to a channel. For example, you can name channel 20 "ESPN".



Notes

- If the CHANNEL GUIDE menu appears in black, the TV is set to a video input and you cannot select CHANNEL GUIDE.
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.
- The CHANNEL GUIDE feature is not available for the AUX input.

Selecting a favorite channel



1 Press CH GUIDE.

The CHANNEL GUIDE menu appears showing channel screens and the corresponding channel number buttons.



2 Press 1 - 9 buttons to select the channel you want.

To cancel the CHANNEL GUIDE menu
Press CH GUIDE again.

(continued)

Operations |

33

Operations |

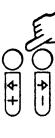
34

Operations |

Operations |

6 Enter the letters (up to four) to caption the channel.

(1) Press + or - to display the first letter.
Each time you press + or - the letter changes as shown below and,
0—1—...—9—A—B—...—Z—E—F—(blank space)



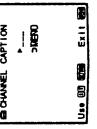
(2) press RETURN to select.



(3) Repeat steps (1) and (2) to select the remaining letters and press RETURN.



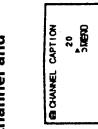
3 Press + or - to select CHANNEL CAPTION and press RETURN.



4 Press RETURN again.

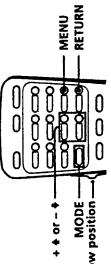


5 Press + or - to select the channel and press RETURN.



Setting video labels (VIDEO LABEL)

This feature allows you to label each video input mode so that you can easily identify the connected equipment. For example, you can label VIDEO 1 IN as VHS.



1 Press MENU.
2 Press + or - to select SET UP and press RETURN.
3 Press + or - to select VIDEO LABEL and press RETURN.



1 Press MENU.
2 Press + or - to select SET UP and press RETURN.



1 Press MENU.

2 Press + or - to select SET UP and press RETURN.

3 Press + or - to select VIDEO LABEL and press RETURN.



4 Press + or - to select the input mode you want to label and press RETURN.



5 Press + or - to select the input mode you want to label and press RETURN.



Selecting Caption Vision (CAPTION VISION)

5 Press + or - to select the label and press RETURN.



Each time you press + or - , the label changes as shown below.

VIDEO 1
VIDEO 1 → S VIDEO → BETA → 8 mm → VHS → LD → DSS

VIDEO 2
VIDEO 2 → BETA → 8 mm → VHS → LD → DSS

VIDEO 3
VIDEO 3 → BETA → 8 mm → VHS → LD → DSS

6 Repeat steps 4 and 5 to label other input modes.

Note

- If more than 90 seconds elapse after you press a button, the menu disappears automatically.

Note

- To display captions, press DISPLAY button. Refer to page 17.
- Captions may appear with a white box or another error instead of a certain word. Poor reception of TV programs can also cause errors in Caption Vision.

Operating a cable box

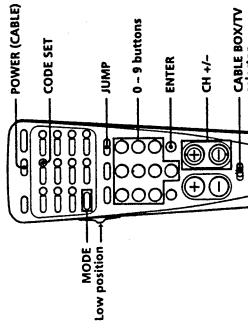
3 Use POWER(CABLE) and the TV control buttons (0 - 9, ENTER, JUMP and CH +/-) to operate the cable converter box.



Setting the manufacturer's code

Follow these instructions to set the manufacturer's code which will enable you to operate a connected cable box with the pre-programmed remote control.

For example, you can set the remote control to operate a connected Zenith cable box as follows:



POWER (CABLE)

MODE

CODE SET

JUMP

ENTER

CH +/-

CABLE BOX/TV selector

Notes

- If more than one code number is listed, try entering them one by one until you come up with the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.

- In some cases, your equipment may use a code that is not provided with this remote control and you may not be able to operate your cable box with the supplied remote control. In this case, use the equipment's own remote control unit.
- When you remove a battery from the remote control, the code may be erased. Reset the code each time you replace the battery, if necessary.

- The JUMP button may not work or cause another function in some cable boxes.

1 Set the CABLE BOX/TV selector to CABLE BOX.



2 While pressing CODE SET, press 6 and 8 (Zenith's code number —see chart on right) and ENTER.



- 1 PRESS MENU.**
- 2 Press + or - to select CAPTION VISION and press RETURN.**
- 3 Press + or - to select the caption type and press RETURN.**



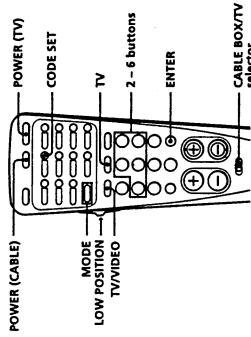
Note

- To display captions, press DISPLAY button. Refer to page 17.
- Captions may appear with a white box or another error instead of a certain word. Poor reception of TV programs can also cause errors in Caption Vision.

To reset the auto cable input select setting

This remote control also features a function that will switch automatically to your cable box/TV input channel when you turn on the TV or cable box.

You can select 2–6 channels or VIDEO 1 depending on your cable box. For example, you can set the TV's channel to 3 whenever you turn the cable box on as follows:



1 Set the CABLE BOX/TV selector to CABLE BOX.



2 While pressing CODE SET, press POWER (CABLE), TV, 3 and ENTER.



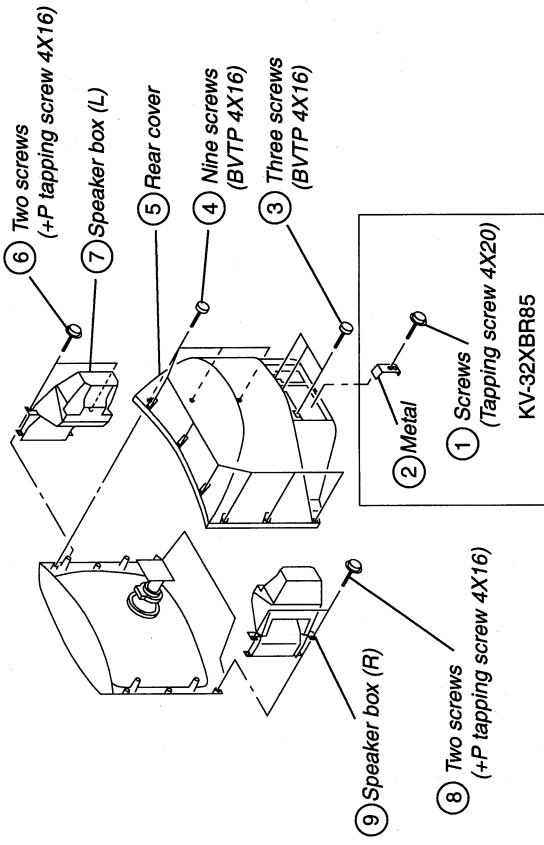
If you are viewing VIDEO 1 for cable TV, you can set as follows:

While pressing CODE SET, press POWER (CABLE), TV/VIDEO and ENTER.

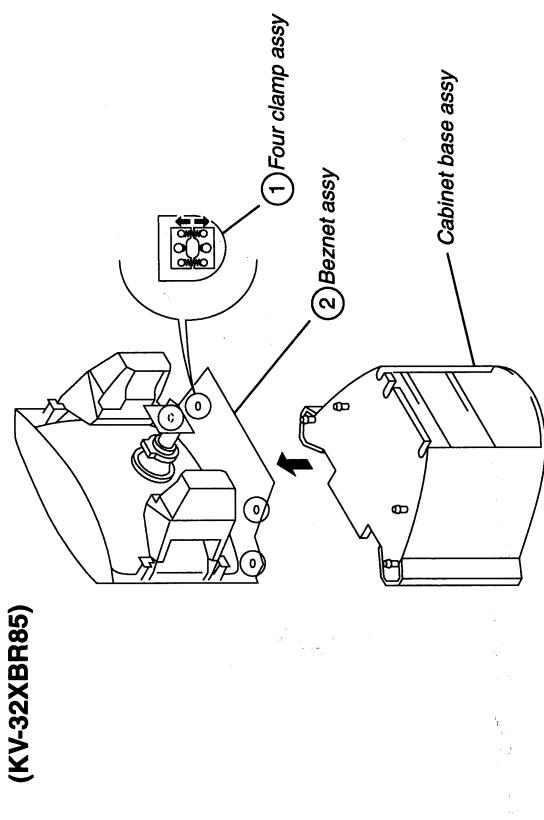


SECTION 2 DISASSEMBLY

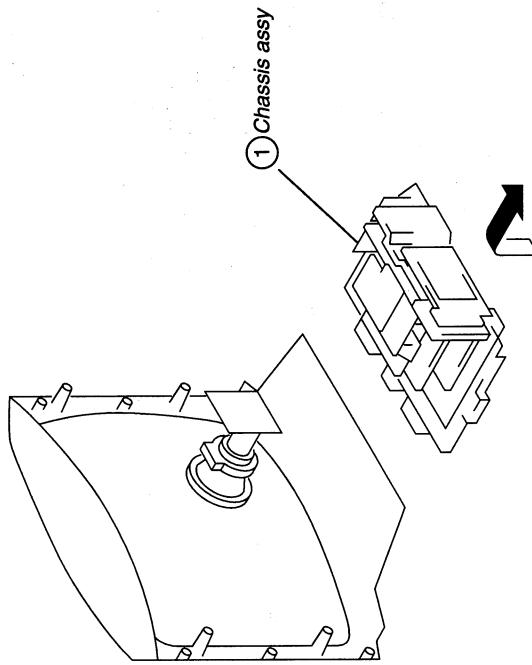
2-1-1. REAR COVER AND SPEAKER BOX REMOVAL



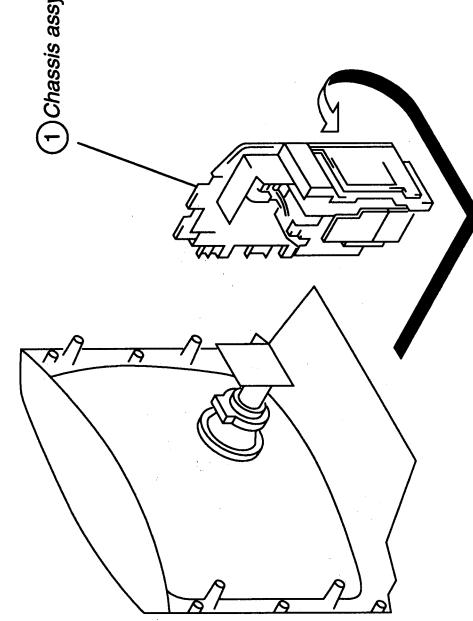
2-1-2. CABINET BASE ASSY REMOVAL (KV-32XBR85)



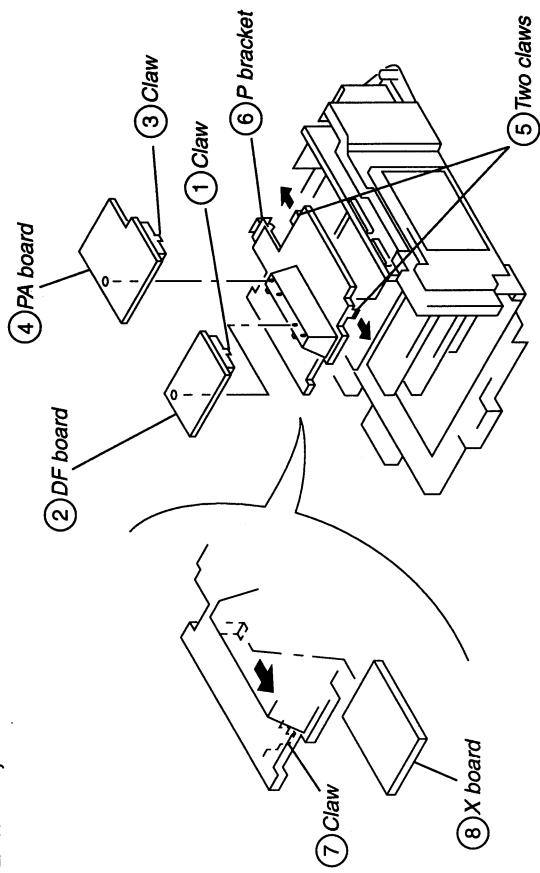
2-2. CHASSIS ASSY REMOVAL



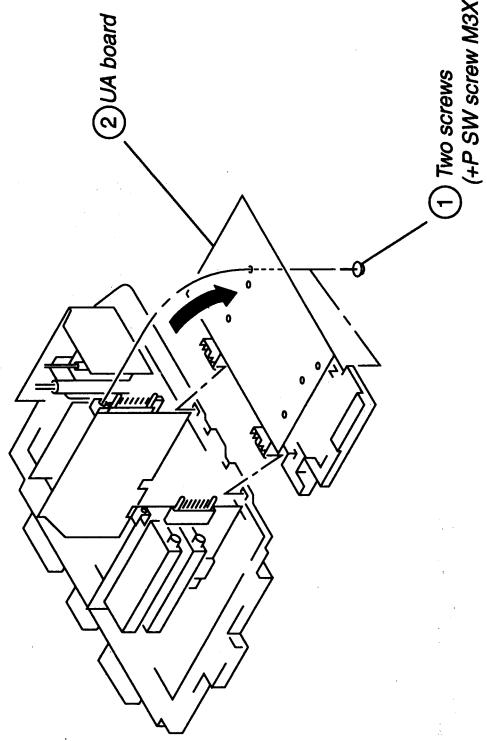
2-3. SERVICE POSITION



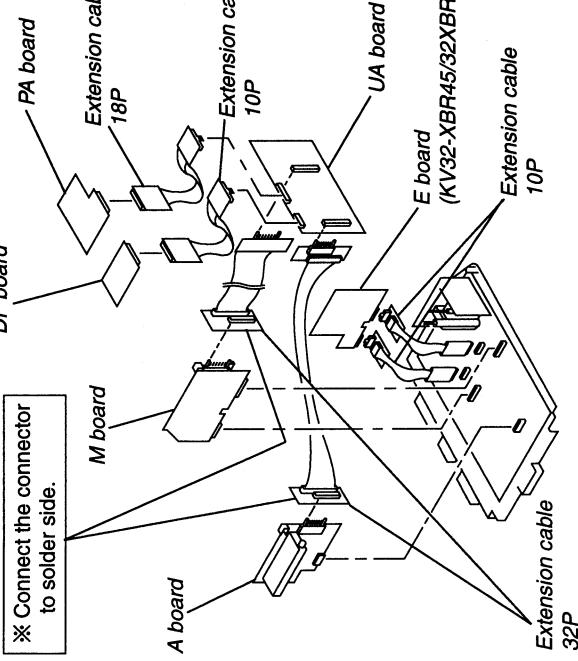
2-4. DF, PA AND X BOARDS REMOVAL



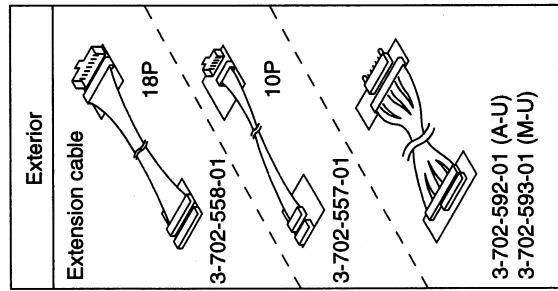
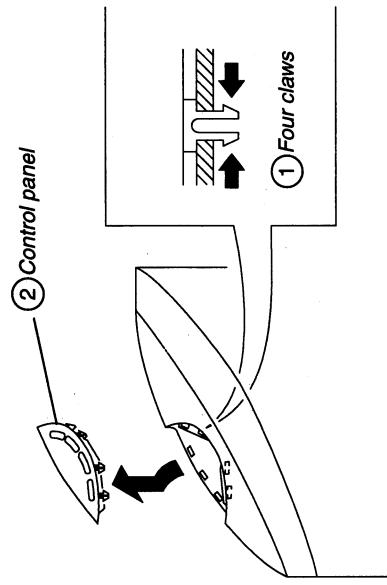
2-5. UA BOARD REMOVAL



2-6. EXTENSION CABLE



2-7. CONTROL PANEL REMOVAL

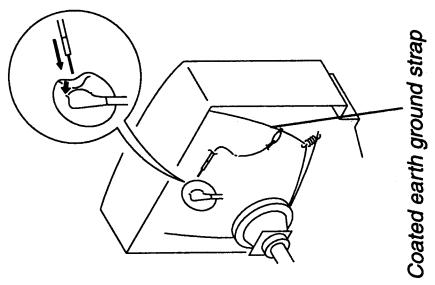


2-8. PICTURE TUBE REMOVAL

WARNING : Before removing anode cap

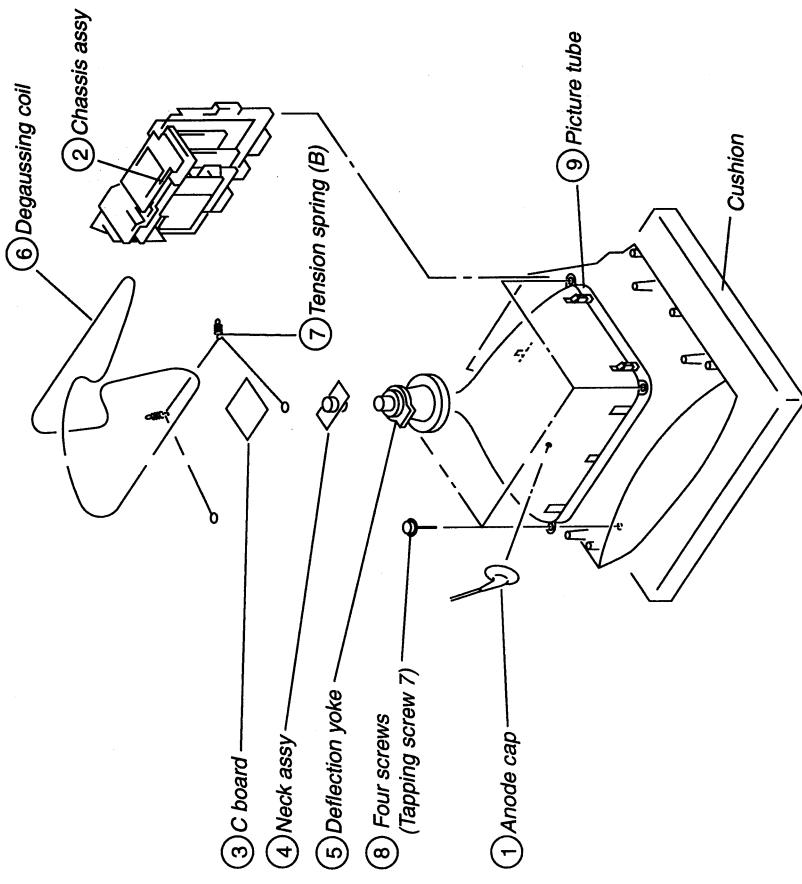
H.V. remains in the CRT even after the power is disconnected.

To avoid electrical shock, before attempting to remove the anode cap, discharge CRT : Short between anode and CRT coated earth ground strap.

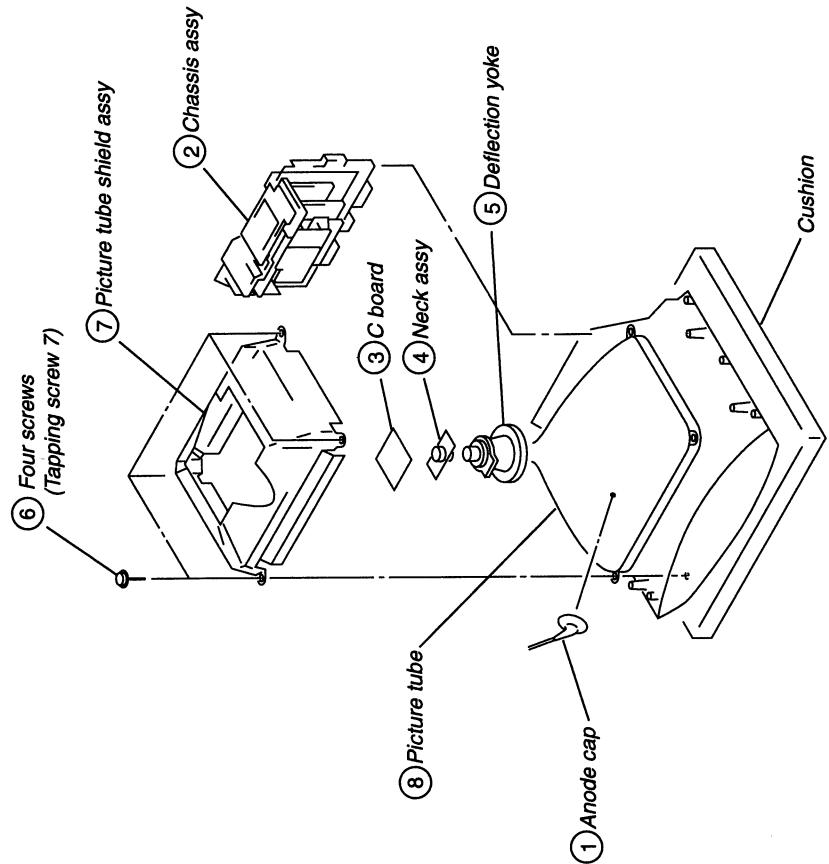


(1) KV-27XBR45/27XBR45M

(1) KV-27XBR45/27XBR45M



(2) KV-32XBR45/XBR85



• REMOVAL OF ANODE-CAP

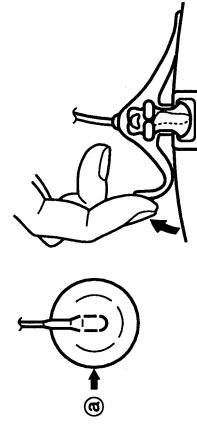
NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis. CRT shield or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES

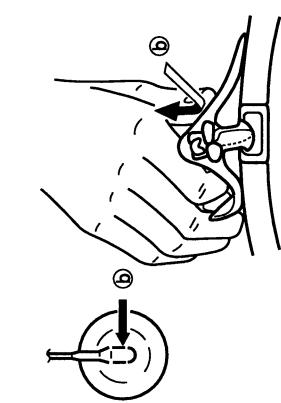
• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.

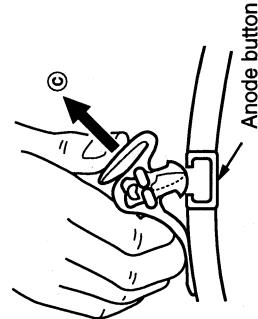
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



- ④ Turn up one side of the rubber cap in the direction indicated by the arrow ④.



- ⑤ Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⑤.



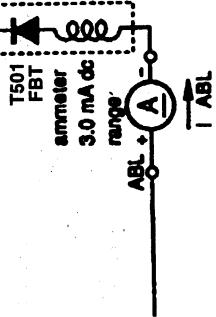
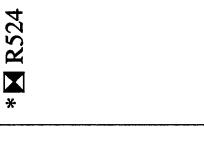
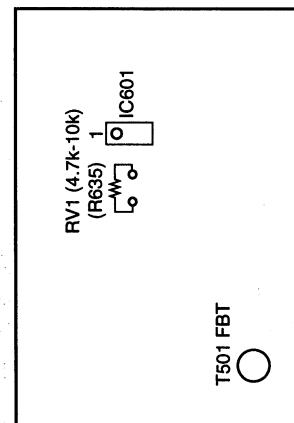
- ⑥ When one side of the rubber cap is separated from the anode button, the anode cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⑥.

SECTION 3

SAFETY RELATED ADJUSTMENTS

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
D BOARD *RESISTOR CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS	The following adjustments should always be performed when replacing the following components (*marked with □ on the schematic diagram). *□ marked parts IC601, PM501, D504, C598, R338, R509, R524, R632, R635, R645, T501	*R524	*PICTURE BRIGHTNESS } maximum } *TP85 (H. PROT) *Digital multimeter 1. Preparation before confirmation 1) Turn the POWER switch ON, and receive *signal and set the *PICTURE and BRIGHTNESS controls to adjustment. 2) Confirm that the voltage of the check terminal of *TP is more than * voltage when the set is operating normally with *Power supply.	<p>*114.0V DC 27 inch 122.3V DC 32 inch *120 ± 2.0 VAC (Power Supply)</p> <p>D BOARD - CONDUCTOR SIDE -</p>

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>2. Hold-down operation confirmation (HV)</p> <ol style="list-style-type: none"> 1) Connect the *connection between the pin of FBT and the land of it with correct polarity. 2) Receive *Signal and adjust the *ABL current to follows with the PICTURE and the BRIGHTNESS controls. 3) Connect the Digital Voltmeter and *DC power Supply via *DIODE to TP. 4) Increase the DC power voltage gradually until the Picture just blanks out. 5) Read the digital voltmeter indication. 6) Turn DC power Source off immediately. <u>*STANDARD</u> <p>7) Input the *dot signal. Adjust the PICTURE and BRIGHTNESS controls from max to min and observe that ABL current spec is not exceeded.</p> <p>8) Repeat steps from (3) to (7). <u>*STANDARD</u></p>	<p>*Currentmeter</p> <p>*Entirely white</p> <p>*DC Power Supply</p> <p>*FBT (T501) Pin ⑩</p> <p>*Via 1T40 to TP-85</p>	<p>*$1760 \pm 50\mu A$ 27 inch *$2080 \pm 50\mu A$ 32 inch</p> <p>*$160 \pm 50\mu A$</p> <p>*Less than 137.5 VDC 27 inch *Less than 143.5 VDC 32 inch</p> <p>*Dot Signal</p>		

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
3. Hold -down readjustment When step 2 is not satisfied, readjustment should be performed by altering the resistance value of *Resistor (a component marked with █).		* █ R524		
		* █ R511		
				

█ RESISTOR CONFIRMATION METHOD (B+ HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (*marked with **█** on the schematic diagram).

* █ marked parts
PM501, R338,
R511, R632, R645,
R650

1. Preparation before confirmation

- 1) Remove the *resistor on the D board and connect a *variable resistor between pin① of IC601 and B+ line.
- 2) Supply *AC voltage to with *variable auto-transformer.

*R635
* RV1 : about $4.7\text{ k}\Omega - 10\text{k}\Omega$
* $130 \pm 2.0\text{ VAC}$

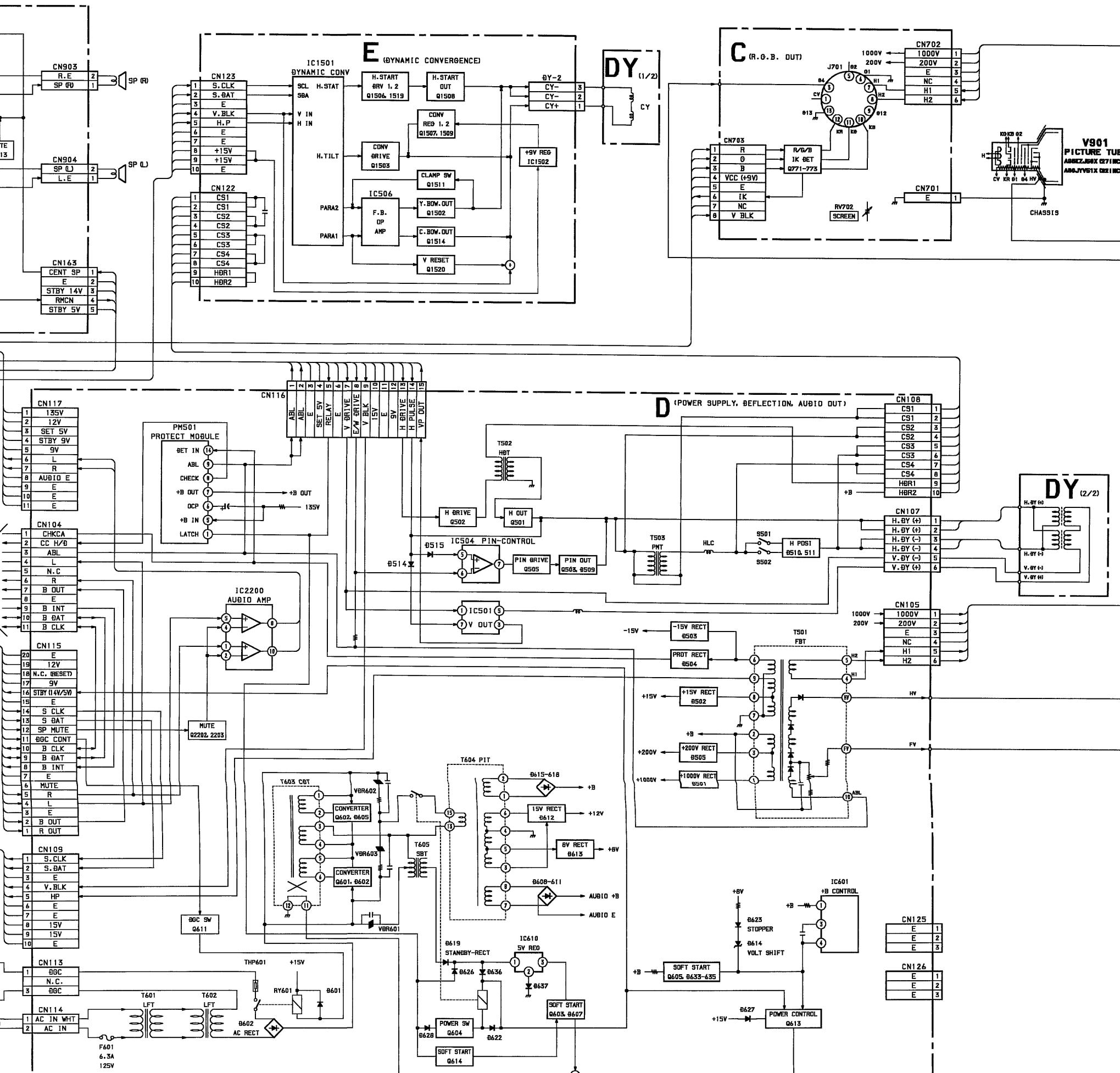
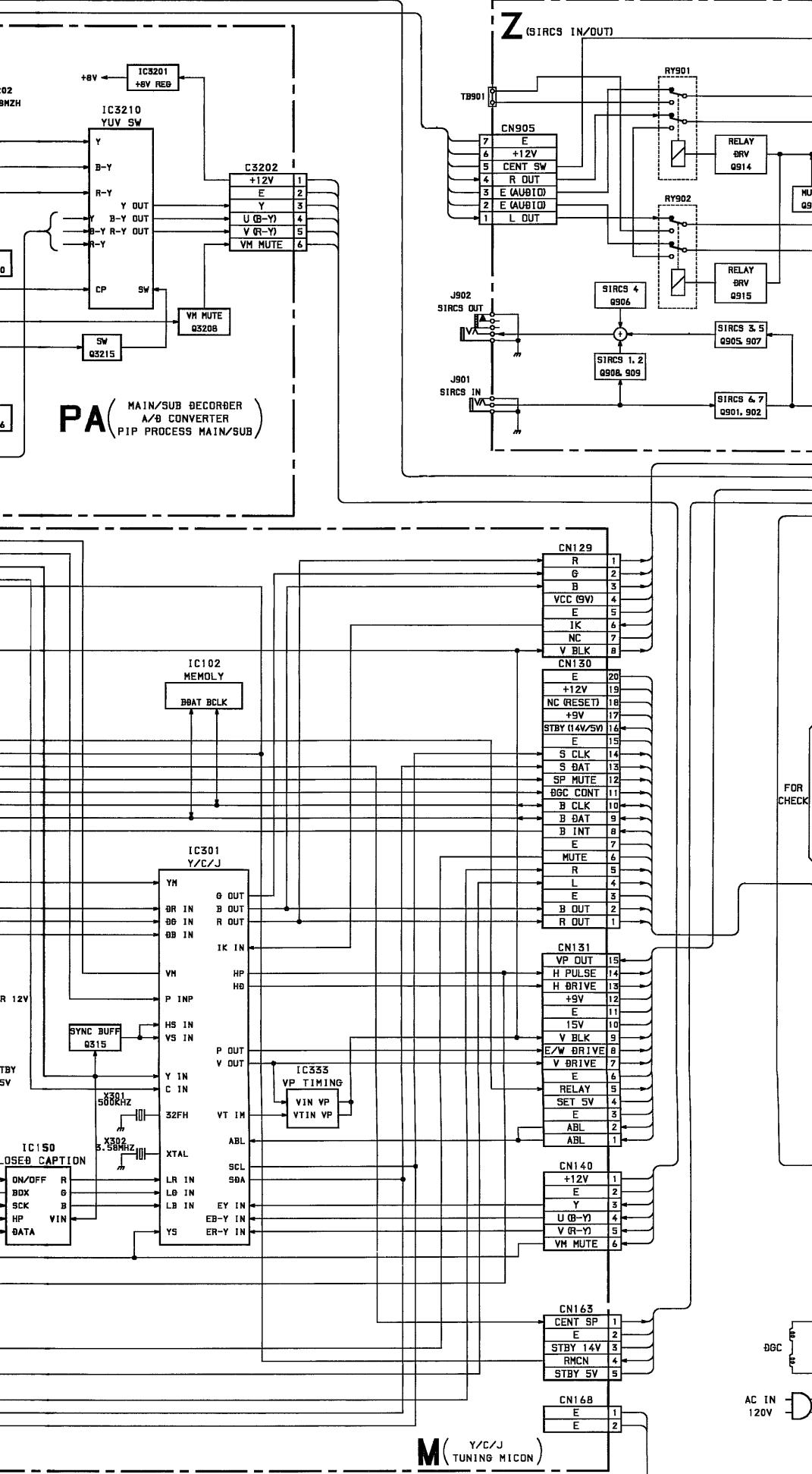
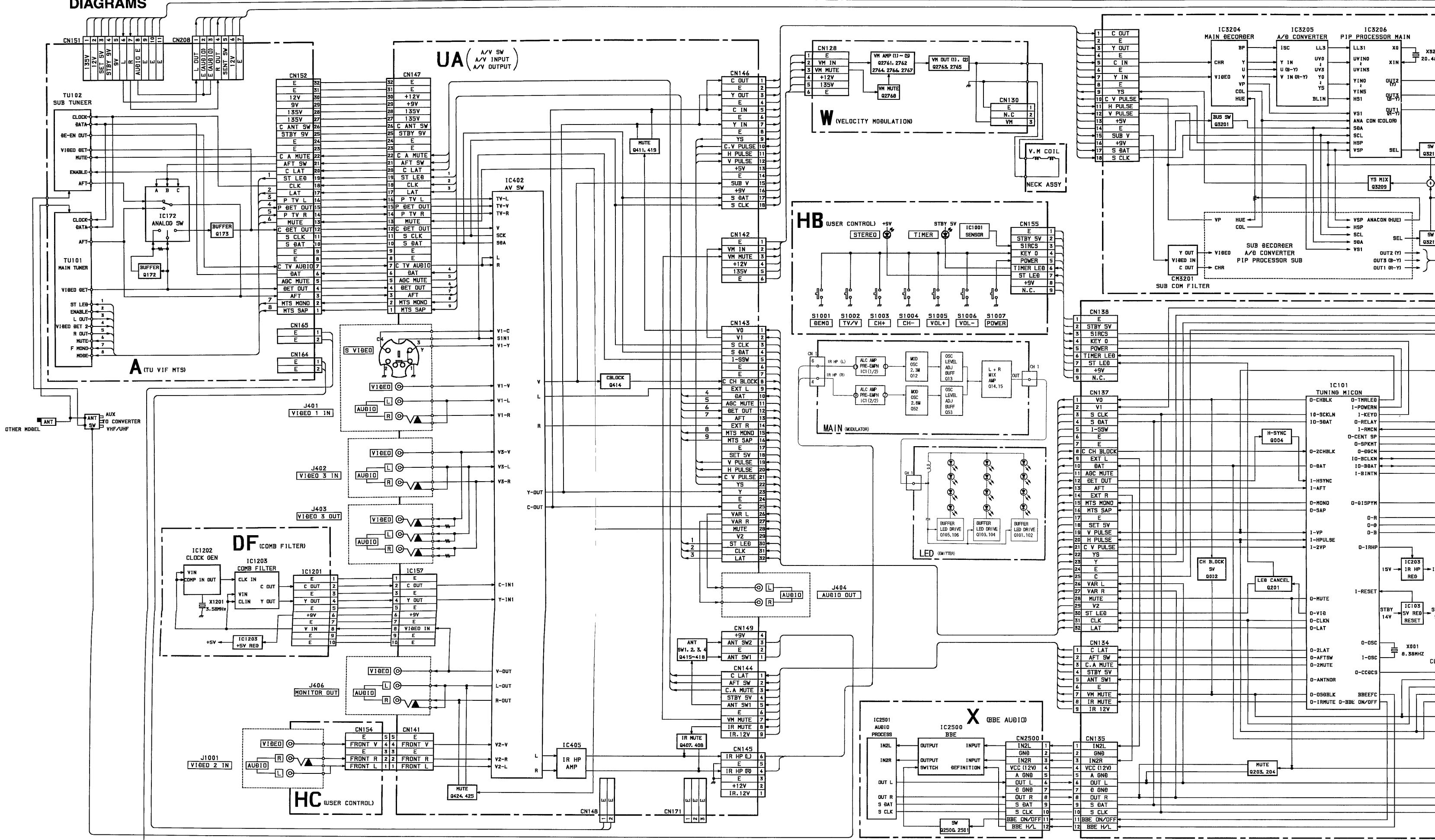
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>2. Hold-down operation voltage (B+)</p> <ol style="list-style-type: none"> 1) Connect the *connection between the pin of FBT and the land of it with correct polarity. 2) Receive *Signal and adjust the *ABL current to follows with the PICTURE and the BRIGHTNESS controls. 3) Connect the *Digital Multimeter to *TP. 4) Increase the DC power voltage gradually by adjusting the resister of RV1 until the Picture just blanks out. 5) Read the digital voltmeter indication. 6) Turn DC power Source off immediately. <p>*STANDARD</p>	<p>*Currentmeter</p> <p>*FBT (T501) Pin⑩</p> <p>*Entirely white</p> <p>*TP91 (+B)</p> <p>*Digital Multimeter</p>	<p>*1760 ± 50µA 27 inch 2080 ± 50µA 32 inch</p> <p>*Less than 142.5 VDC 27 inch *Less than 140.0 VDC 32 inch</p> <p>* 160 ± 50µA</p> <p>* Dot signal</p>		

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
B+ VOLTAGE CONFIRMATION The following adjustments should always be performed when replacing the following *components. 1) Supply *Voltage AC to with *variable auto-transformer. 2) Input an entirely *signal. 3) Set the PICTURE control and the BRIGHTNESS control to adjustment. 4) Confirm the voltage of *TP is less than *Voltage DC. 5) If step 4) is not satisfied, replace the *components repeat above steps.	<ul style="list-style-type: none"> * IC601, R635 	<ul style="list-style-type: none"> * Variable auto-transformer * Monoscope 	<ul style="list-style-type: none"> * TP91 (+B) 	<ul style="list-style-type: none"> * 130 ± 0 V AC * PICTURE, BRIGHTNESS initial reset * IC602, R635 * Less than 137.0 VDC

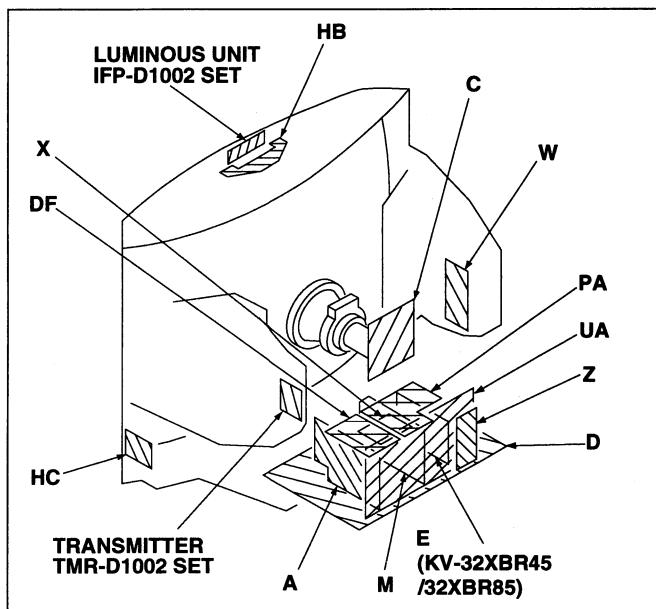
MEMO

SECTION 4 PROGRAMS

-1. BLOCK DIAGRAMS



4-2. CIRCUIT BOARDS LOCATION



4-3. PRINTED WRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
 - All electrolytics are in 50V unless otherwise specified.
 - All resistors are in ohms.
- $\text{k}\Omega=1000\Omega$, $\text{M}\Omega=1000\text{k}\Omega$
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : 1/4W

- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved.
(Refer to R511 and R524 adjustment on Page 25 – 29.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced ()	Adjustment ()
PM501, R511, R632, R645, R650 R338	D BOARD M BOARD
IC601, PM501, D504, C598, R509, R524, R632, R635, R645, T501, R338	D BOARD M BOARD

- As to the voltage value shown by the semiconductors on the Schematic Diagram, see the another list

- Readings are taken with a color-bar signal input.
- Readings are taken with a $10\text{M}\Omega$ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.

* : Measurement impossibility.

: B+line.

: B-line.

(Actual measured value may be different).

: signal path. (RF)

Circled numbers are waveform references.

Reference information

RESISTOR	: RN METAL FILM
	: RC SOLID
	: FPRD NONFLAMMABLE CARBON
	: FUSE NONFLAMMABLE FUSIBLE
	: RW NONFLAMMABLE WIREWOUND
	: RS NONFLAMMABLE METAL OXIDE
	: RB NONFLAMMABLE CEMENT
	: ADJUSTMENT RESISTOR
COIL	: LF-8L MICRO INDUCTOR
CAPACITOR	: TA TANTALUM
	: PS STYROL
	: PP POLYPROPYLENE
	: PT MYLAR
	: MPS METALIZED POLYESTER
	: MPP METALIZED POLYPROPYLENE
	: ALB BIPOLAR
	: ALT HIGH TEMPERATURE
	: ALR HIGH RIPPLE

Note: The symbol display is on the component side.

The components identified by shading and mark are critical for safety. Replace only with part number specified.

The symbol indicate fast operating fuse. Replace only with fuse of same rating as maked.

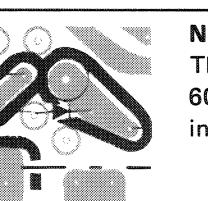
Note: Les composants identifiés par un trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole indique une fusible a action rapide. Doit etre remplacée par une fusible de même valeur, comme maque.

D [POWER SUPPLY,
DEFLECTION,
AUDIO OUT]

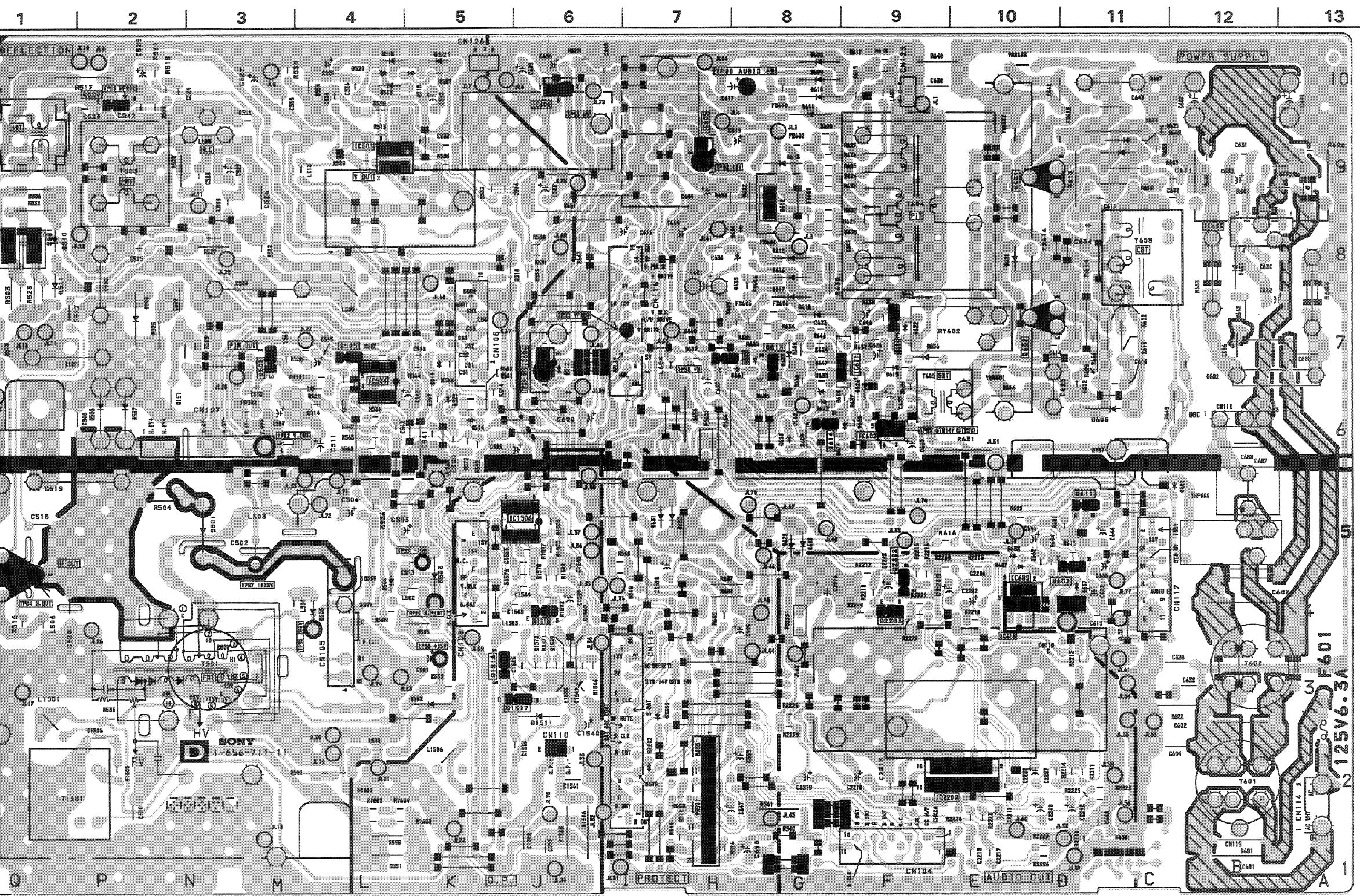
- D BOARD -

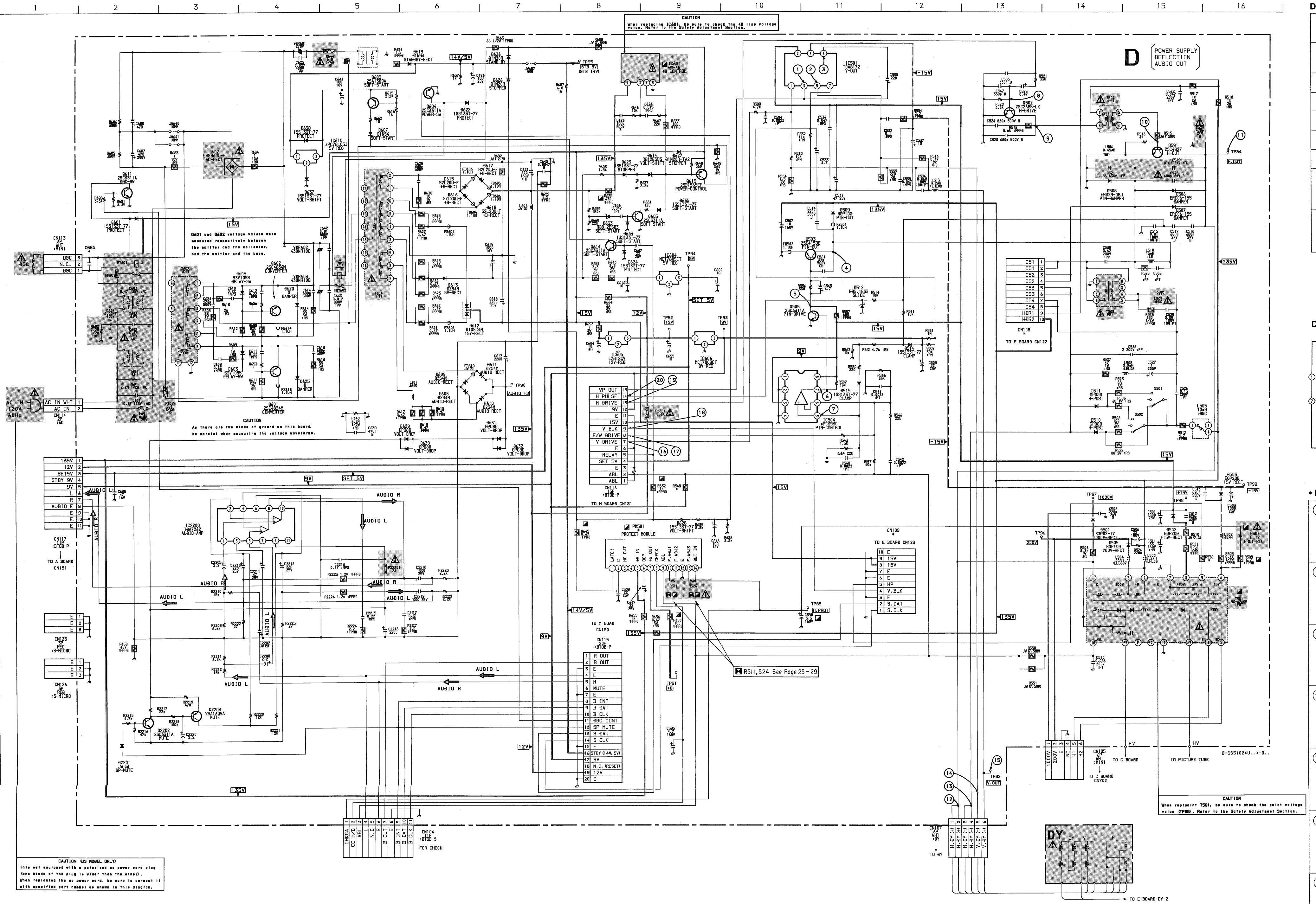
IC	D512	D-6
IC501	B-4	D514
IC504	D-4	D515
IC601	D-9	D601
IC604	D-6	D602
IC605	B-7	D603
IC606	A-6	D605
IC610	F-10	D607
IC2200	G-10	D608
TRANSISTOR	D609	A-8
Q502	A-2	D610
Q503	D-3	D611
Q505	C-4	D612
Q591	E-1	D613
Q601	B-10	D614
Q602	C-10	D615
Q603	E-11	D616
Q604	C-9	D617
Q605	D-7	D618
Q611	E-11	D619
Q613	D-8	D622
Q614	D-8	D623
Q2202	F-9	D624
Q2203	F-9	D626
DIODE	D627	D-8
D501	E-3	D628
D502	G-5	D629
D503	F-5	D630
D504	F-4	D631
D505	F-4	D632
D506	D-2	D633
D507	D-2	D634
D508	C-2	D635
D509	D-4	D636
D510	B-1	D637
D511	C-1	D638
		E-10



NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.





	① 2.1	③ -13.8	⑤ -0.2	⑦ 2.1							
	② 12.0	④ -15.9	⑥ 13.0								
	① GND	③ 12.0	⑤ 2.3	⑦ 0.2							
	② GND	④ GND	⑥ 3.5	⑧ 12.0							
	① 138	③ 2.5	④ 14.8	⑤ GND							
	① 8.3	② 5.2	③ GND								
	① 15.4	② 12.5	③ GND								
	① 12.5	② 9.1	③ GND								
	① 12.7	② 0.7	③ 6.0								
D	① 1.5	④ 6.5	⑦ NC	⑩ 0.2							
	② 6.5	⑤ 1.5	⑧ 0.2	⑪ NC							
	③ 17.9	⑥ 0	⑨ 33.2								
1	① 3.9	④ NC	⑦ 138	⑩ 122	⑬ 129						
	② 0.3	⑤ 138	⑧ 137	⑪ 45.5	⑭ 133						
	③ NC	⑥ 137	⑨ 2.3	⑫ GND							

BOARD TRANSISTOR VOLTAGE LIST			
	E	C	B
502	GND	105	- 1.2
503	0	17.3	0.4
505	GND	3.5	0.2
591	0	139	- 0.2
601	32.0	154	31.9
602	103	32.0	- 104
603	6.0	- 0.5	6.0
604	GND	0.2	0.8
605	GND	14.9	0.2
611	GND	16.3	0
613	15.5	4.7	15.0
614	GND	6.0	0.4
2202	GND	0	0.8
2203	31.1	31.1	30.4

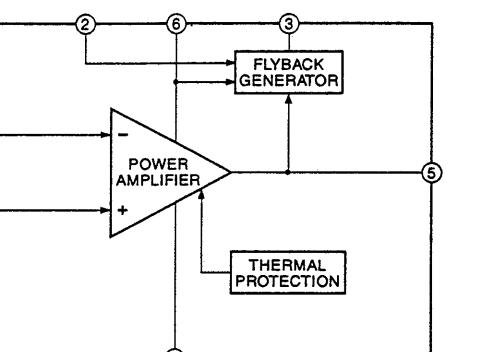
BOARD TABLE OF DIFFERENCES BETWEEN MODELS			
f.No.	27inch	32inch	
508	0.0022M 630V	—	
585	0.22M 125V	—	
108	—	○	
109	—	○	
501	PM-38	PM-39	
525	47 2W	—	
536	—	4.7 1/4W	
548	—	22k	

BOARD TABLE OF DIFFERENCES TWEEN MODELS

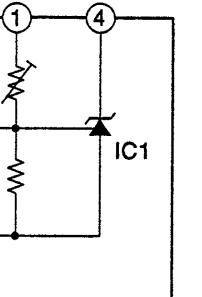
f.No.	27inch	32inch
508	0.0022M 630V	—
685	0.22M 125V	—
I108	—	○
I109	—	○
501	PM-38	PM-39
525	47 2W	—
536	—	4.7 1/4W
548	—	22k

○ : To be mount
- : Not mount

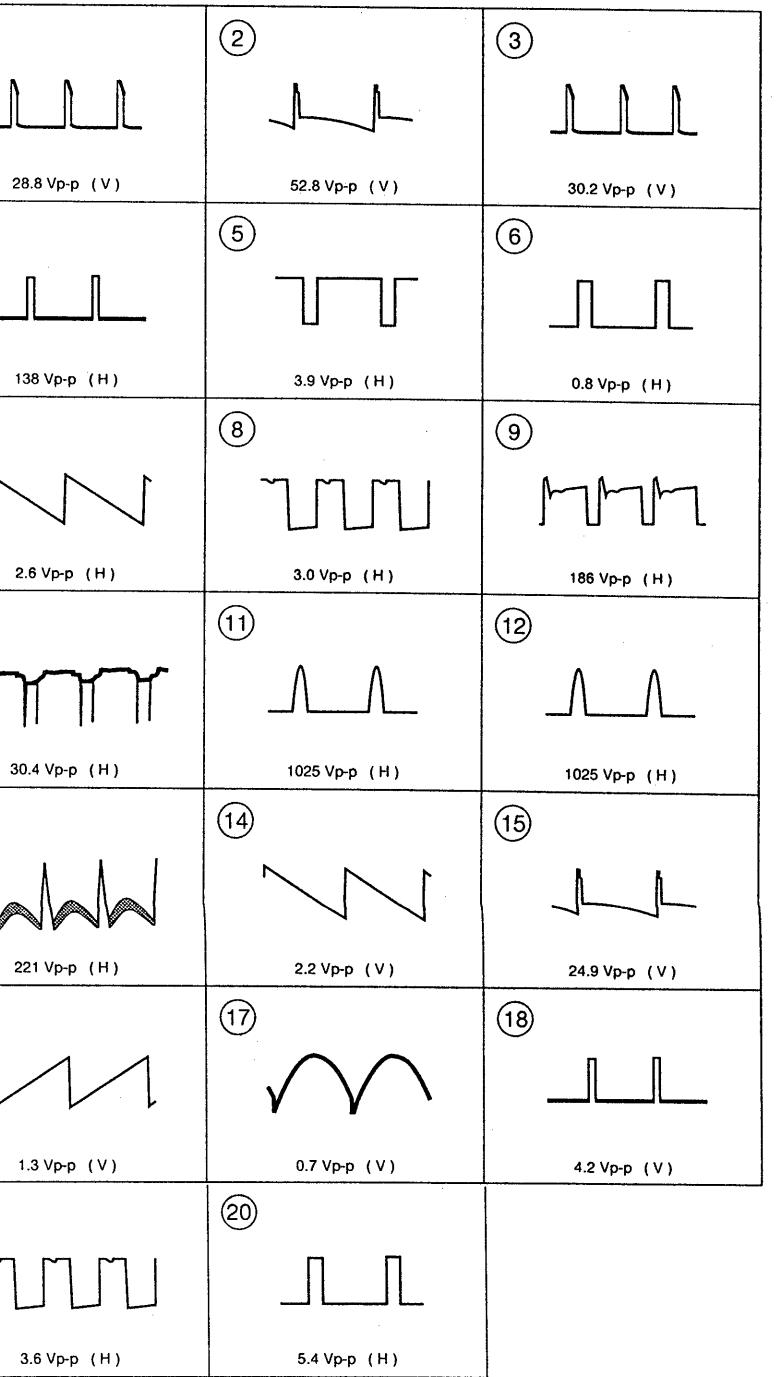
ARD IC501 TDA8172

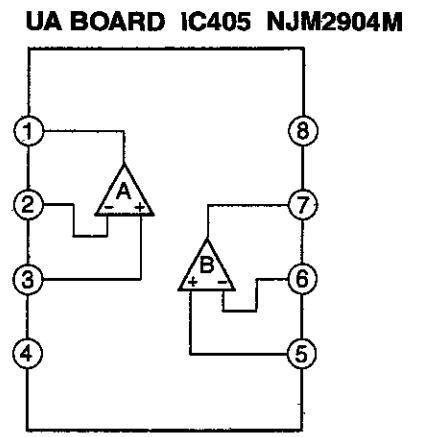


ARD IC601 DM-48

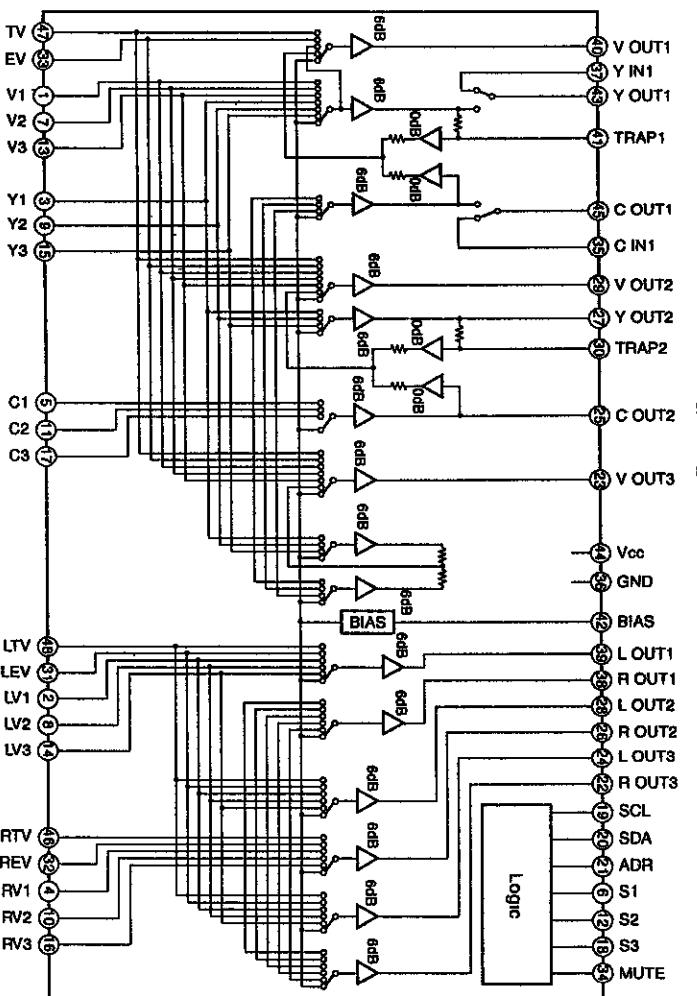


STANDARD WAVEFORMS

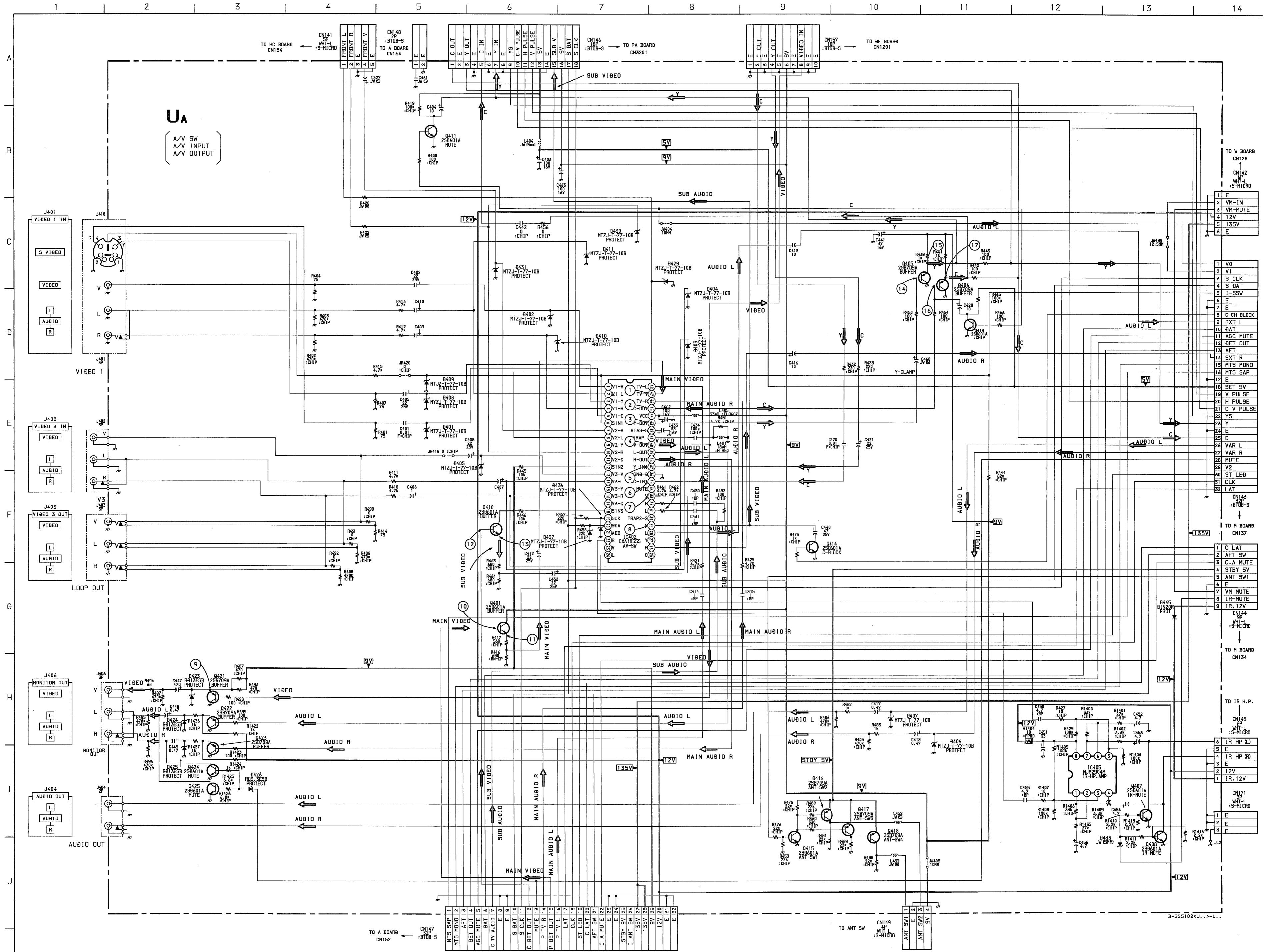
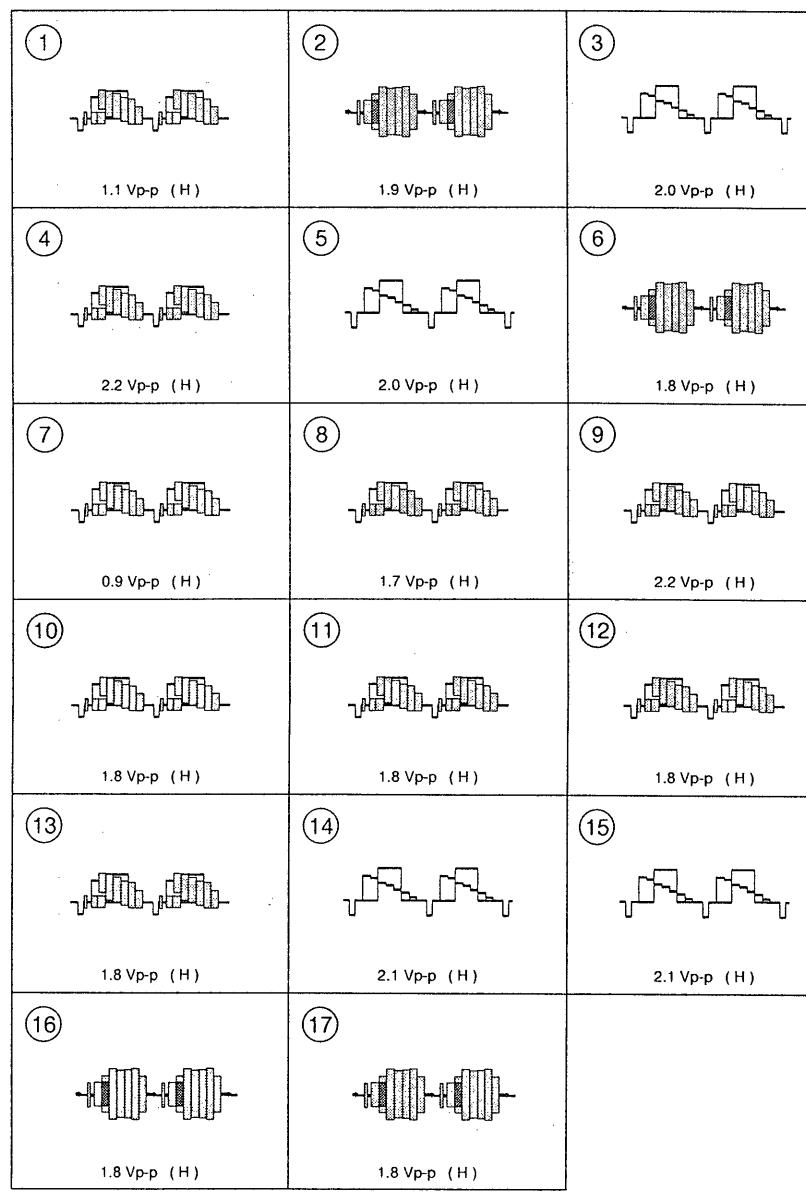


UA BOARD IC VOLTAGE LIST

UA BOARD IC VOLTAGE LIST

IC402	① 4.7 ② 4.8 ③ 4.7 ④ 4.8 ⑤ 4.7 ⑥ 4.8 ⑦ 4.8 ⑧ 4.6 ⑨ NC ⑩ 4.7	① NC ② 8.2 ③ NC ④ NC ⑤ NC ⑥ NC ⑦ NC ⑧ 4.7 ⑨ 5.0 ⑩ 0	① 4.8 ② 4.8 ③ 4.7 ④ NC ⑤ 4.7 ⑥ GND ⑦ 4.7 ⑧ 4.8 ⑨ 4.8 ⑩ 4.7	① 4.7 ② 4.8 ③ 4.6 ④ 8.9 ⑤ 4.6 ⑥ 4.8 ⑦ 4.7 ⑧ 4.8 ⑨ 4.8 ⑩ 4.7
IC405	① 6.1 ② 6.1	③ 6.1 ④ GND	⑤ 6.1 ⑥ 6.1	⑦ 6.1 ⑧ 12.2

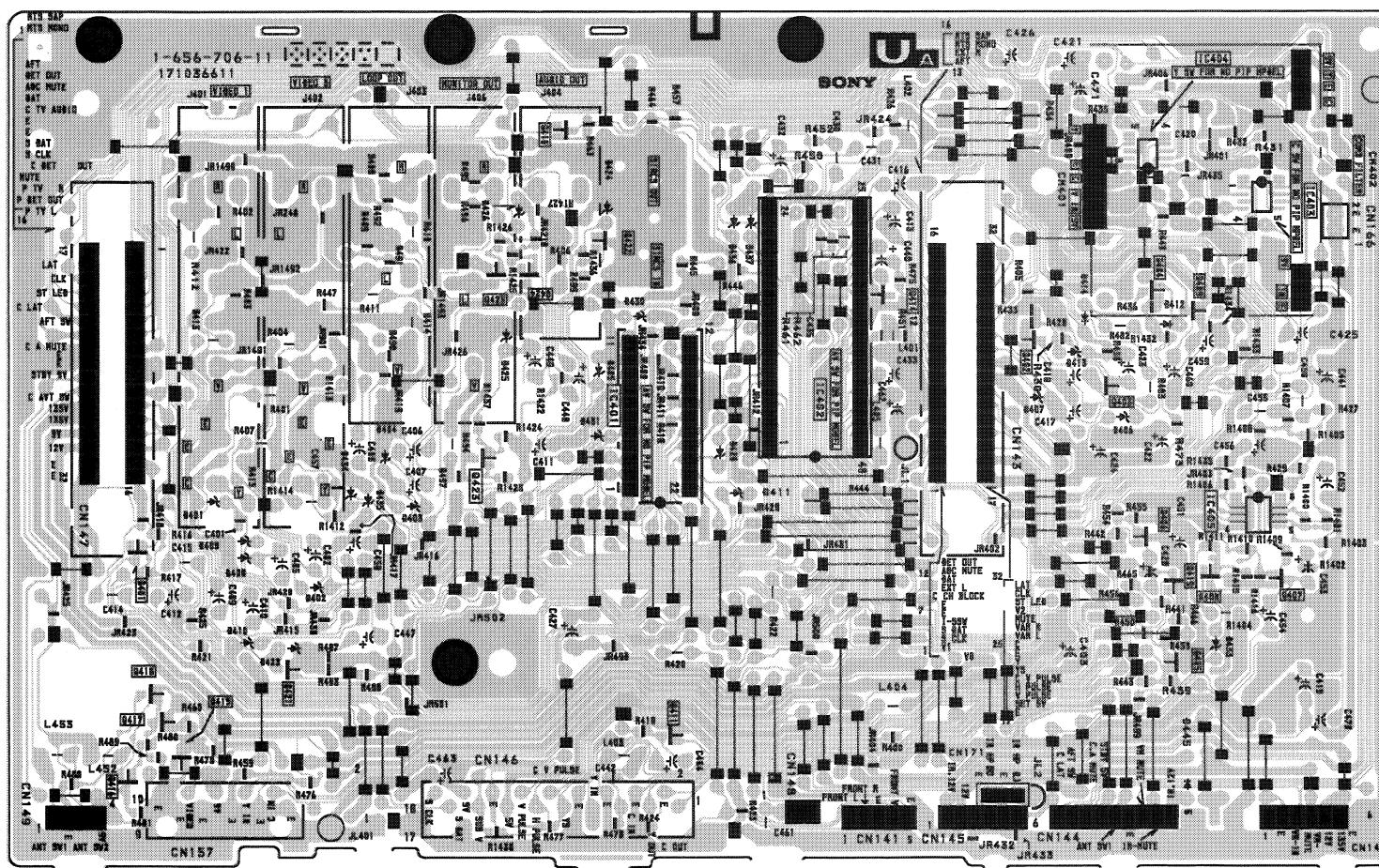
UA BOARD IC402 CXA1855S

UA BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q401	4.2	9.0	4.9
Q405	5.3	GND	4.6
Q406	5.3	GND	4.6
Q407	GND	0	0
Q408	GND	0	0
Q410	3.9	9.0	4.6
Q411	GND	5.1	0
Q414	GND	4.7	0
Q415	GND	0.2	0.8
Q416	5.2	5.1	4.5
Q417	5.2	5.2	4.3
Q418	5.2	0	5.2
Q419	GND	5.1	0
Q421	5.3	GND	4.7
Q422	5.4	GND	4.8
Q423	5.3	GND	4.8
Q424	GND	0	0
Q425	GND	0	0

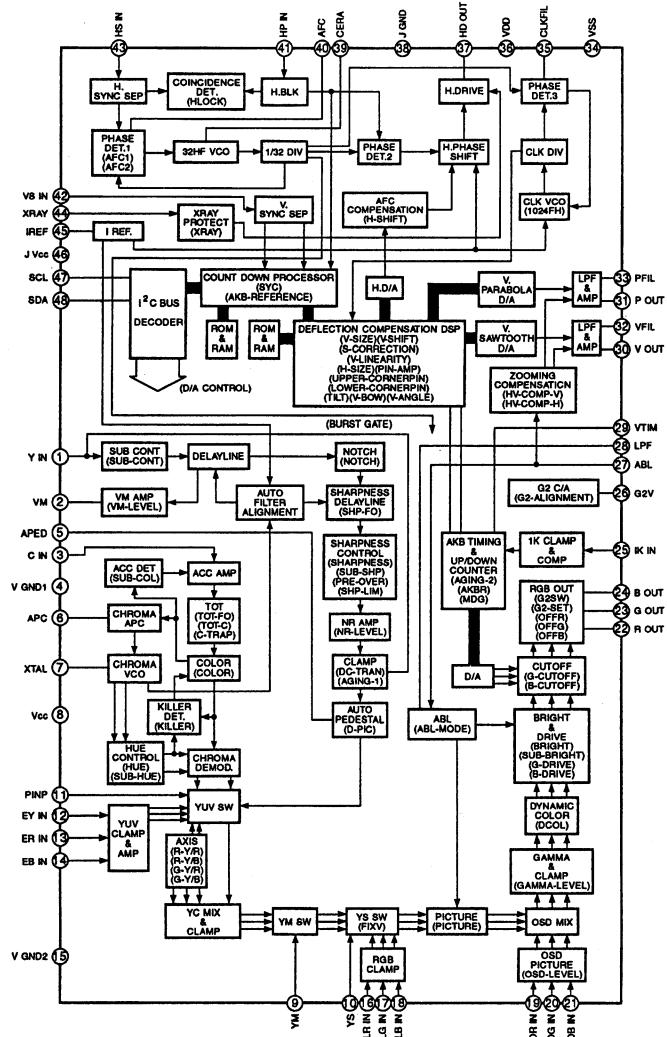
UA BOARD WAVEFORMS


UA [A/V SW,
A/V INPUT,
A/V OUTPUT]

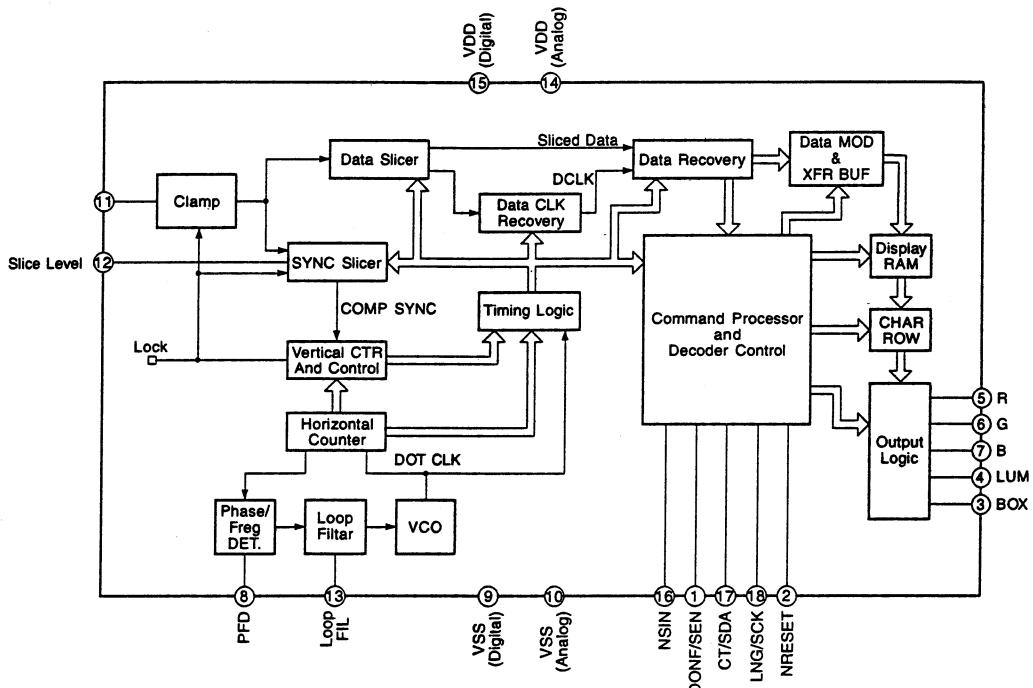
- UA BOARD -



M BOARD IC301 CXA1477AS



M BOARD IC150 Z8622812PSC





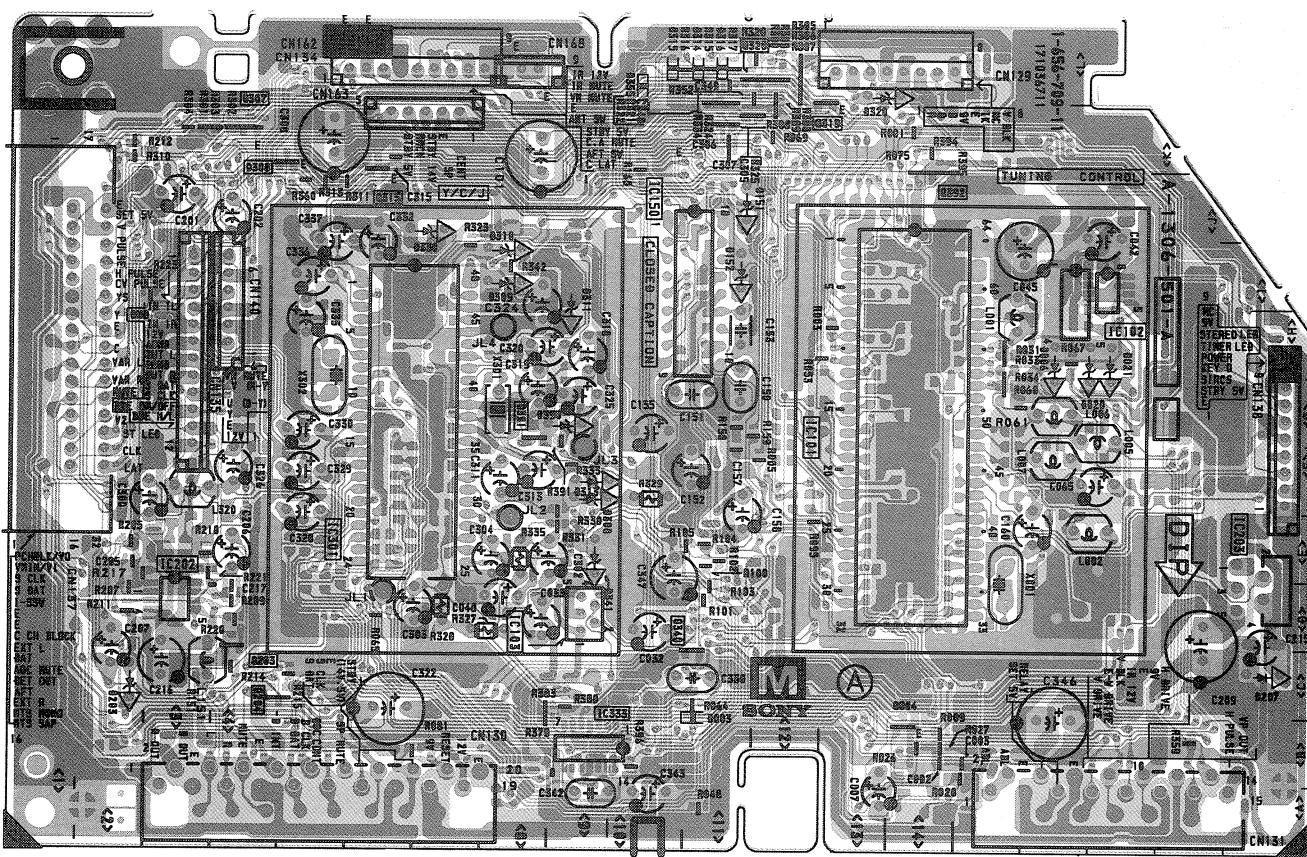
[Y/C/J,
TUNING MICON]

- M BOARD -

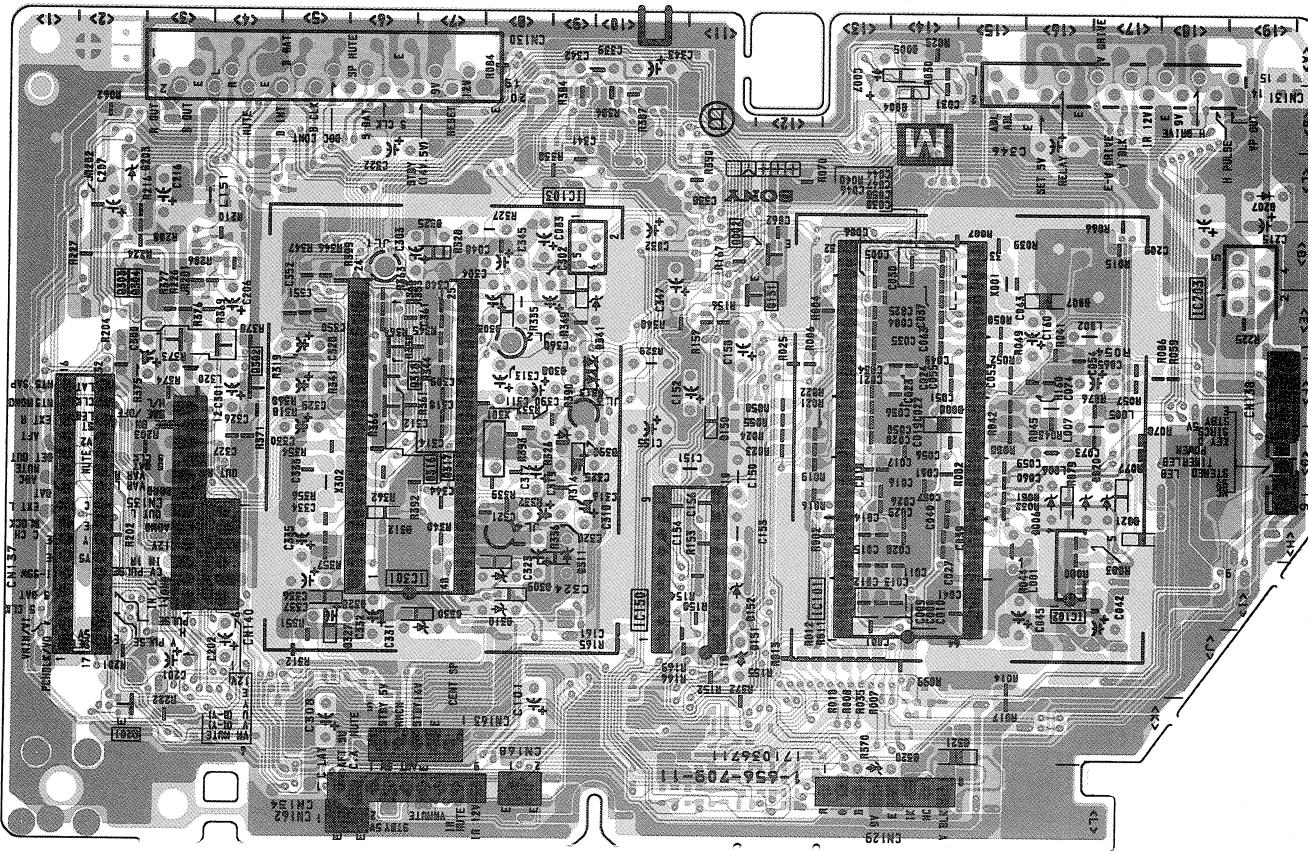
<Component Side>

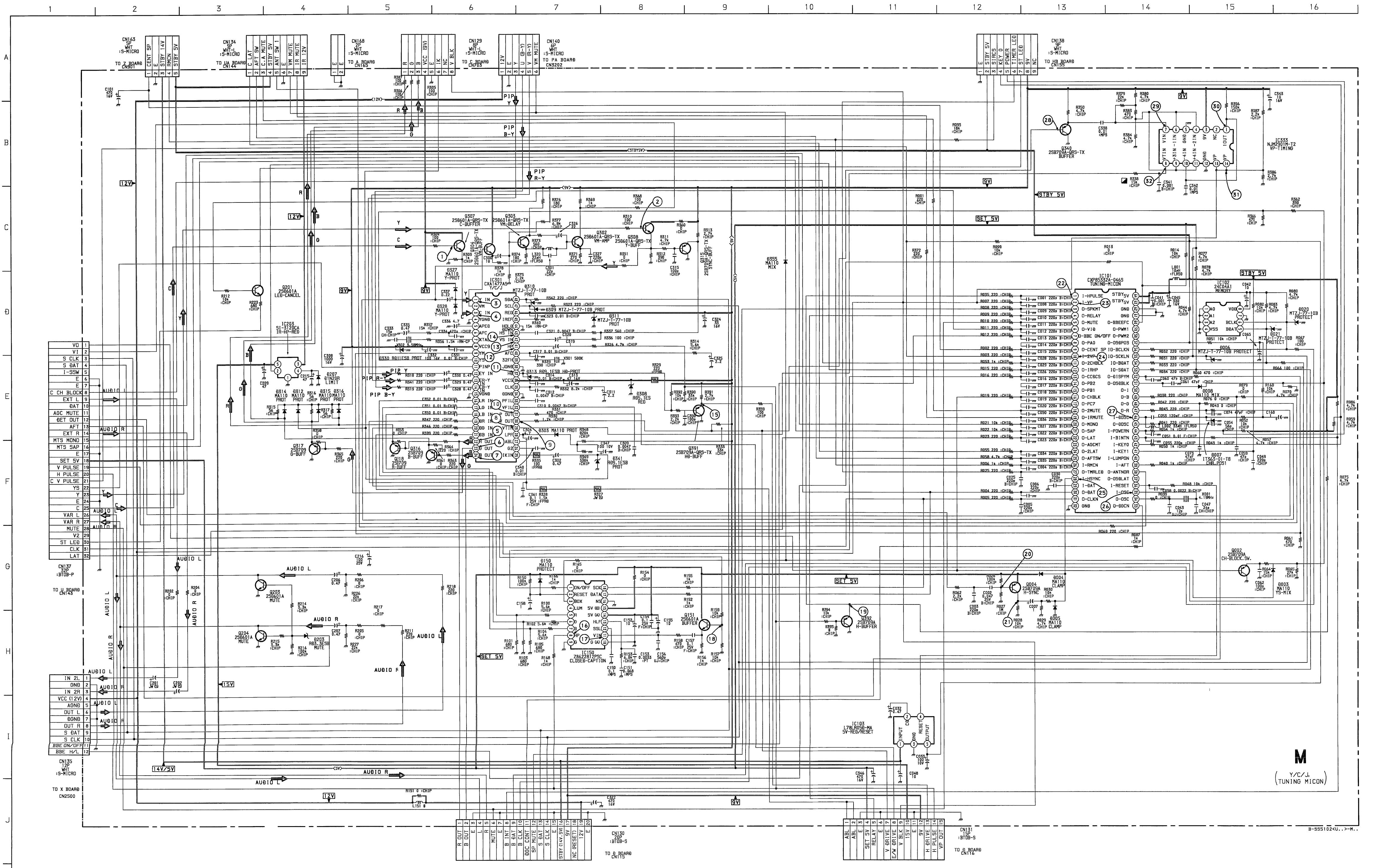
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.



<Conductor Side>





KV27XBR45 S/M

52

Schematic diagrams

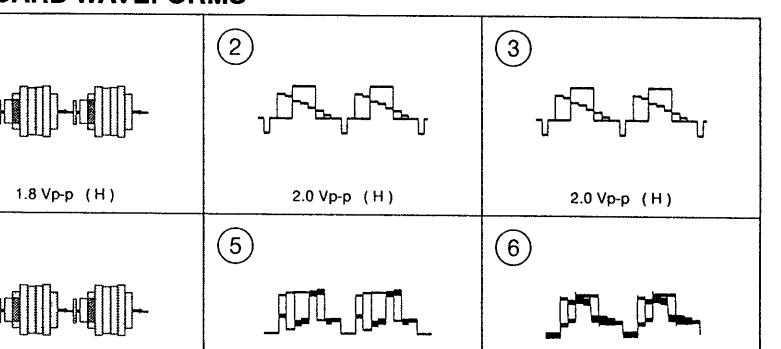
Schematic diagrams

■

M BOARD IC VOLTAGE LIST

IC101	①	0.9	⑯	0	㉗	5.2	㉙	0.2	㉚	5.0
	②	0.6	⑯	0	㉘	0.2	㉛	5.2	㉜	5.0
	③	4.9	⑯	0	㉙	0	㉛	5.2	㉜	5.0
	④	5.0	⑯	0	㉚	5.1	㉛	5.2	㉜	5.0
	⑤	0	⑯	0.2	㉛	5.1	㉛	5.2	㉜	2.8
	⑥	5.2	⑯	0	㉖	GND	㉛	3.1	㉜	0
	⑦	5.2	⑯	0	㉖	0	㉛	3.1	㉜	0
	⑧	0	㉑	0	㉖	2.7	㉛	0	㉜	0.2
	⑨	0	㉒	0.2	㉖	2.3	㉛	0	㉜	GND
	⑩	0.5	㉓	0	㉖	5.2	㉛	0	㉜	GND
	⑪	0	㉔	0.2	㉖	0	㉛	0	㉜	5.2
	⑫	0	㉕	2.8	㉖	5.1	㉛	0	㉜	5.2

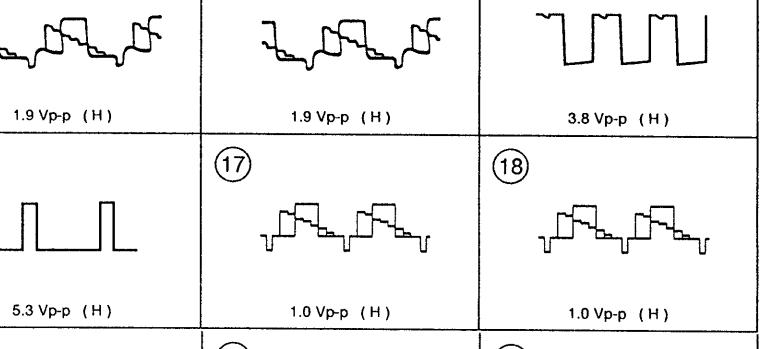
(13) 0.2 (26) 4.9 (39) 2.1 (52) 0



1.8 Vp-p (H) 3.5 Vp-p (H) 3.2 Vp-p (H)

IC102	① GND ② GND	③ GND ④ GND	⑤ 5.0 ⑥ 5.0	⑦ GND ⑧ 5.2	
IC103	① 12.6	② 6.3	③ GND	④ 5.2	⑤ 5.2
IC150	① 0.2 ② 5.1 ③ 0 ④ NC	⑤ 0 ⑥ 0 ⑦ 0 ⑧ 0.4	⑨ GND ⑩ GND ⑪ 2.0 ⑫ 1.8	⑬ 2.1 ⑭ 5.1 ⑮ 5.1 ⑯ GND	⑰ 5.1 ⑲ 5.1
IC203	① GND	② 0	③ -0.7	④ 0	⑤ 16.4

ANSWER The answer is 1000.

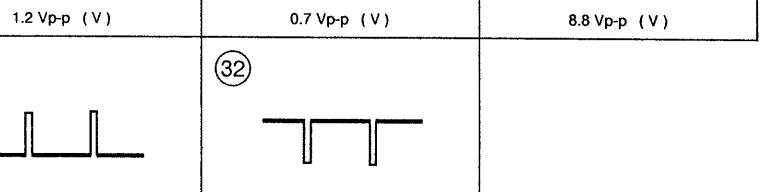


(1) ⑨ 0 ⑯ 0 ⑯ 5.9 ⑯ 2.6
 ⑩ 0 ⑰ 0 ⑰ 3.1 ⑰ 4.3

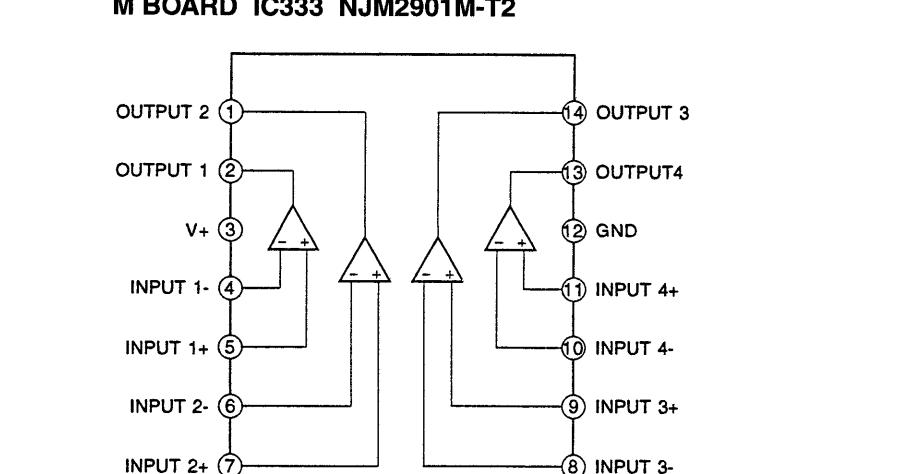
IC333	① 8.0	④ 4.4	⑦ 0	⑩ 8.0	⑬ 0.6
	② NC	⑤ GND	⑧ 5.9	⑪ 4.4	⑭ 0.6
	③ 9.1	⑥ 4.4	⑨ 4.4	⑫ GND	

M BOARD TRANSISTOR VOLTAGE LIST					
	E	C	B		
Q002	0	GND	0		
Q004	5.2	1.2	5.2		
Q151	1.7	5.2	2.3		
Q201	4.2	7.2	5.0		
Q203	GND	0	0		
Q204	GND	0	0		
Q302	0.9	6.2	1.5		
Q303	1.5	7.7	2.2		
Q304	6.9	9.1	7.5		
Q307	4.6	9.1	5.3		
Q308	4.6	9.1	5.3		
Q315	5.3	GND	4.6		
Q340	3.7	GND	3.1		
Q391	3.2	GND	4.1		

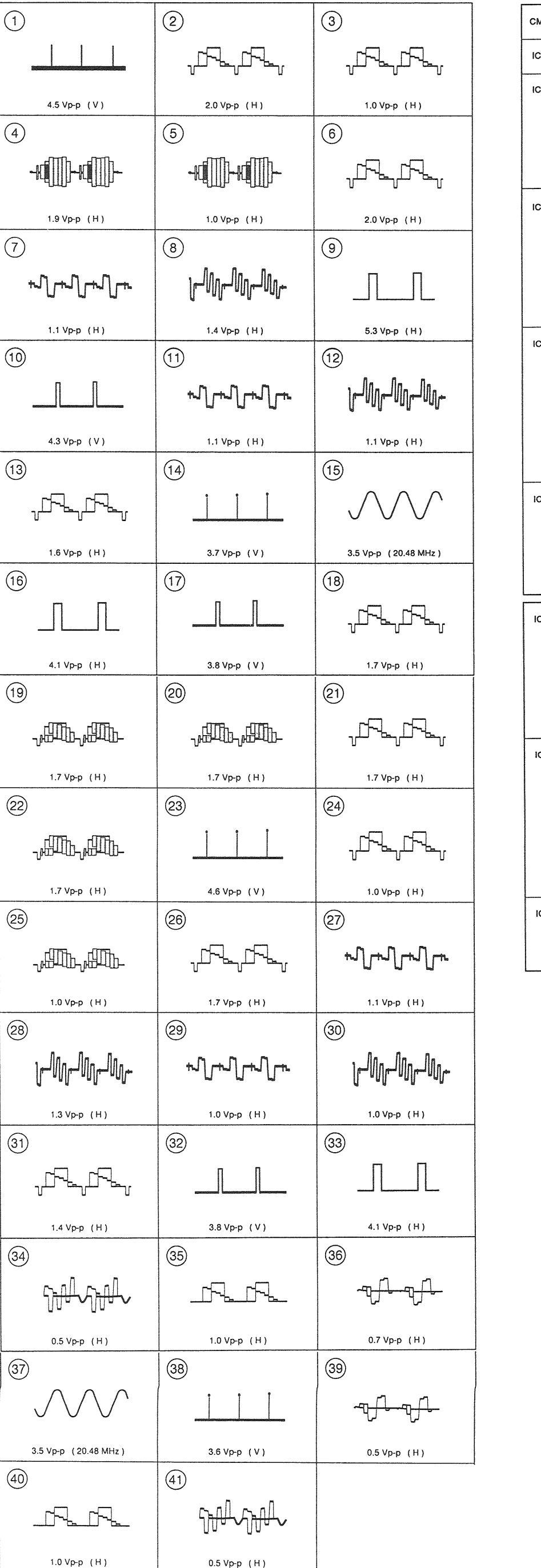
Q392	1.0	GND	0.4
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M BOARD - 1000 - NUMBERS



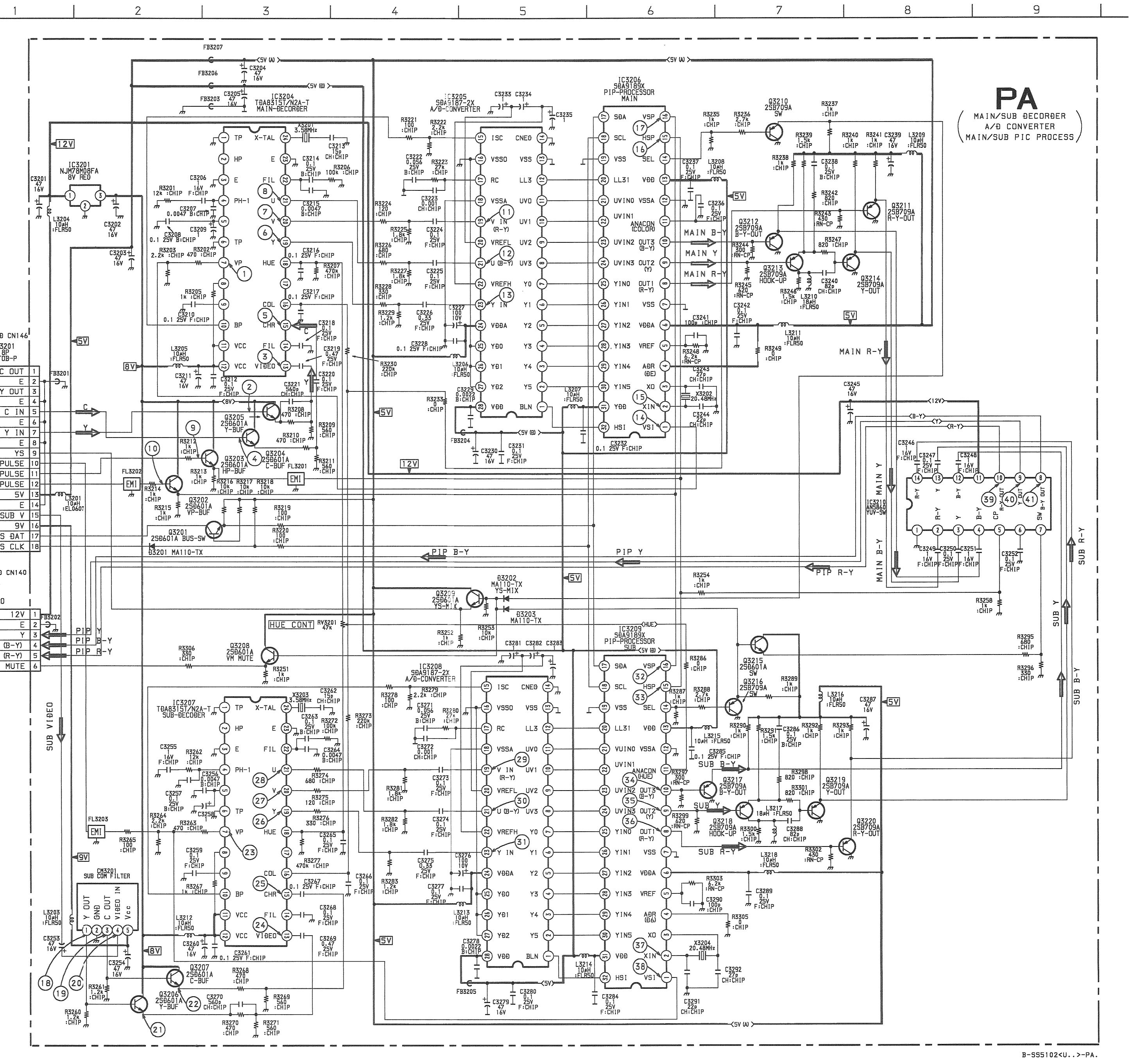
• PA BOARD WAVEFORMS



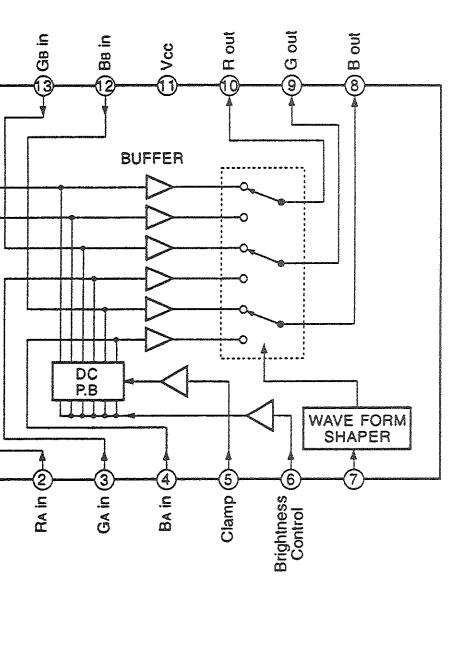
PA BOARD IC VOLTAGE LIST

CM3201	① 5.6	② GND	③ 5.6	④ 6.2	⑤ 9.0
IC3201	① 12,3	② GND	③ 8.5		
IC3204	① GND	② GND	③ 8.5	④ 2.6	⑤ 3.1
	② NC	③ 0	④ 8.5	⑤ NC	⑥ 4.8
	③ GND	④ 8.5	⑤ 4.1	⑥ 2.7	⑦ GND
	④ 4.0	⑤ 1.9	⑥ 3.6	⑦ 3.7	⑧ 2.9
	⑤ 6.9	⑥ 0	⑦ 4.4	⑧ 3.0	
IC3205	① 4.2	② 2.2	③ GND	④ 2.7	⑤ GND
	② 1.7	③ 2.5	④ GND	⑤ 1.1	⑥ GND
	③ 1.8	④ 2.5	⑤ 0.4	⑥ 2.7	⑦ GND
	④ 2.0	⑤ 1.2	⑥ 1.5	⑦ GND	⑧ 2.1
	⑤ 1.9	⑥ 1.2	⑦ 2.4	⑧ 2.5	⑨ 5.0
	⑩ 2.1	⑪ 2.7	⑫ 0	⑬ 5.0	
IC3206	① 0.3	② 0.6	③ 0.7	④ 1.2	⑤ 1.8
	② 2.5	③ 0	④ 0.4	⑤ 2.5	⑥ 1.7
	③ 2.0	④ 0.5	⑤ 1.7	⑥ 2.5	⑦ 5.0
	④ 5.0	⑤ 1.1	⑥ 4.9	⑦ 2.2	⑧ 4.2
	⑤ 2.7	⑥ 1.2	⑦ 2.7	⑧ 2.1	⑨ 5.0
	⑩ 5.0	⑪ 0	⑫ 2.7	⑬ 1.9	⑭ 4.2
	⑮ GND	⑯ 0	⑰ 1.2	⑱ 2.0	
IC3207	① GND	② GND	③ 8.5	④ 0.2	⑤ 3.0
	② NC	③ 0.3	④ 8.5	⑤ 1.1	⑥ 5.1
	③ GND	④ 8.5	⑤ 7.6	⑥ 2.7	⑦ GND
	④ 3.9	⑤ 2.0	⑥ 0	⑦ 4.0	⑧ 2.9
	⑨ 6.9	⑩ 0.4	⑪ 4.3	⑫ 3.0	
IC3208	① 4.2	② 1.3	③ GND	④ 2.7	⑤ GND
	② *	③ 0.9	④ 1.1	⑤ 1.1	⑥ GND
	③ 1.8	④ 1.0	⑤ 0.3	⑥ 2.7	⑦ GND
	④ 0.6	⑤ 1.5	⑥ 1.1	⑦ 2.1	⑧ 5.0
	⑨ *	⑩ 0.6	⑪ 2.5	⑫ 1.8	⑬ *
	⑪ *	⑫ 2.7	⑬ 0.2	⑭ 5.0	
IC3209	① 0.5	② 0	③ 0.7	④ 0.6	⑤ 1.8
	② 2.5	③ 0	④ 0.4	⑤ 1.0	⑥ *
	③ 2.0	④ 0.5	⑤ 4.9	⑥ 0.9	⑦ 5.0
	④ 5.0	⑤ 1.2	⑥ 1.3	⑦ 1.3	⑧ 4.2
	⑨ 5.0	⑩ 0	⑪ 2.7	⑫ *	⑬ *
	⑮ GND	⑯ 0.2	⑰ 0.6	⑱ 0.6	
IC3210	① GND	② 6.3	③ 0	④ 6.3	⑤ 6.3
	② 6.3	③ 0.3	④ 6.3	⑤ 12.3	⑥ 6.3
	③ 6.3	④ 5.2	⑤ 6.3	⑥ 6.3	

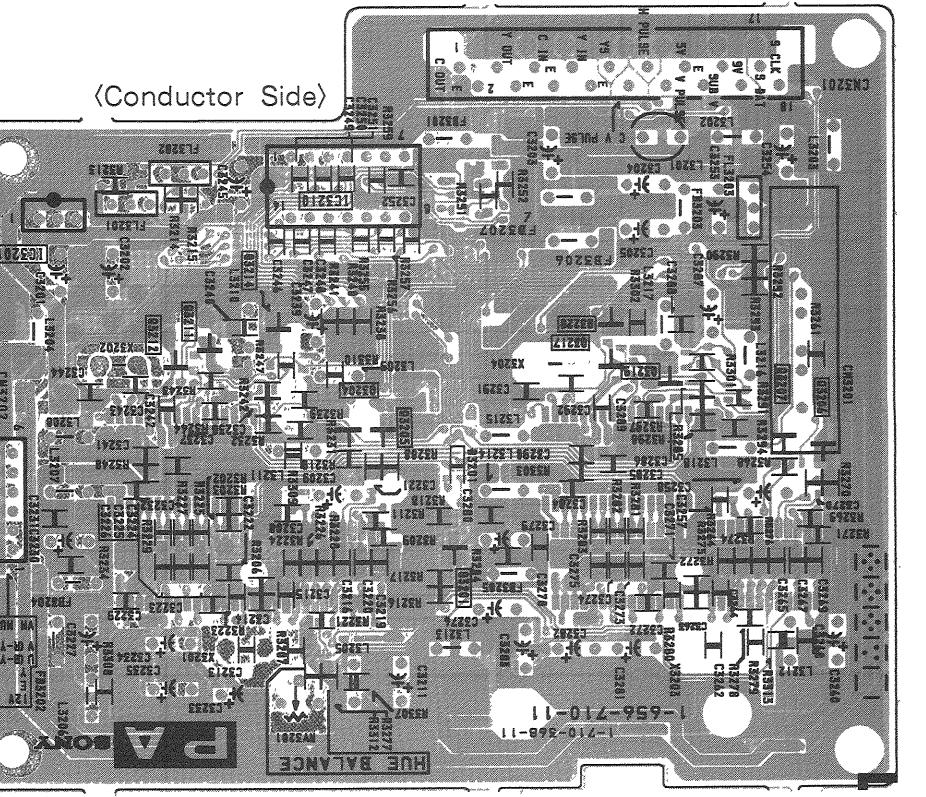
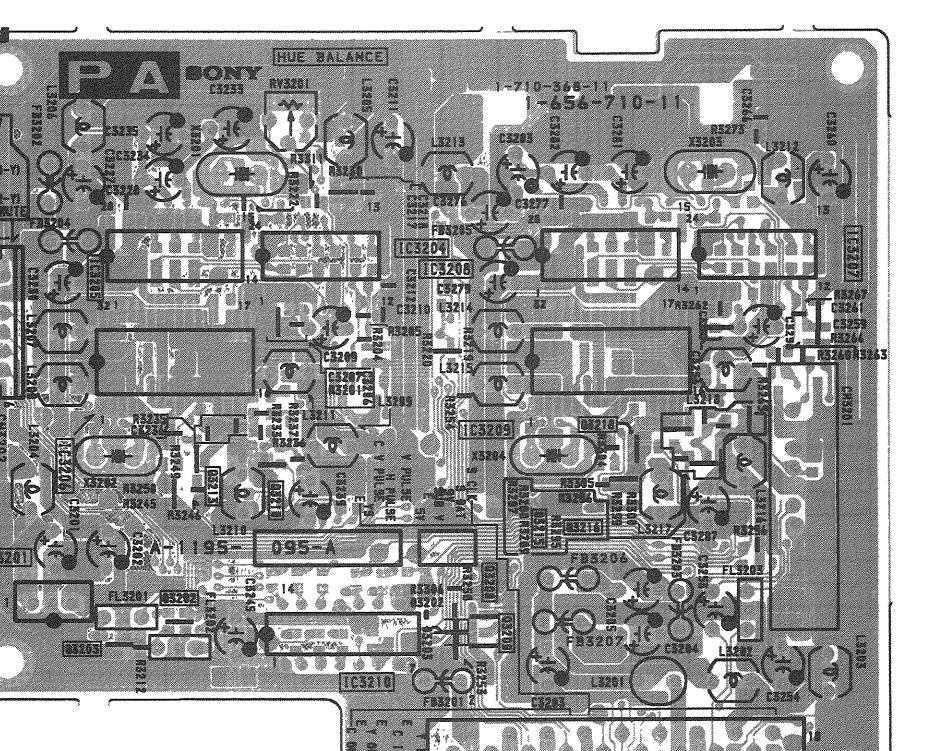
PA BOARD TRANSISTOR VOLTAGE LIST			
E	C	B	
Q3201	4.9	5.0	4.9
Q3202	0.4	8.5	0.4
Q3203	0.7	8.5	0.3
Q3204	4.7	8.5	5.3
Q3205	4.7	8.5	5.3
Q3206	4.9	8.5	5.6
Q3207	5.0	8.5	5.6
Q3208	0	5.0	0.4
Q3209	0	5.0	0.4
Q3210	0.9	GND	0.2
Q3211	1.3	GND	0.6
Q3212	1.2	GND	0.5
Q3213	0.8	0	0
Q3214	1.4	GND	0.8
Q3215	0.3	5.0	0.8
Q3216	0.8	GND	0.2
Q3217	1.1	GND	0.5
Q3218	0.8	0	0
Q3219	1.4	GND	0.8
Q3220	1.2	GND	0.6



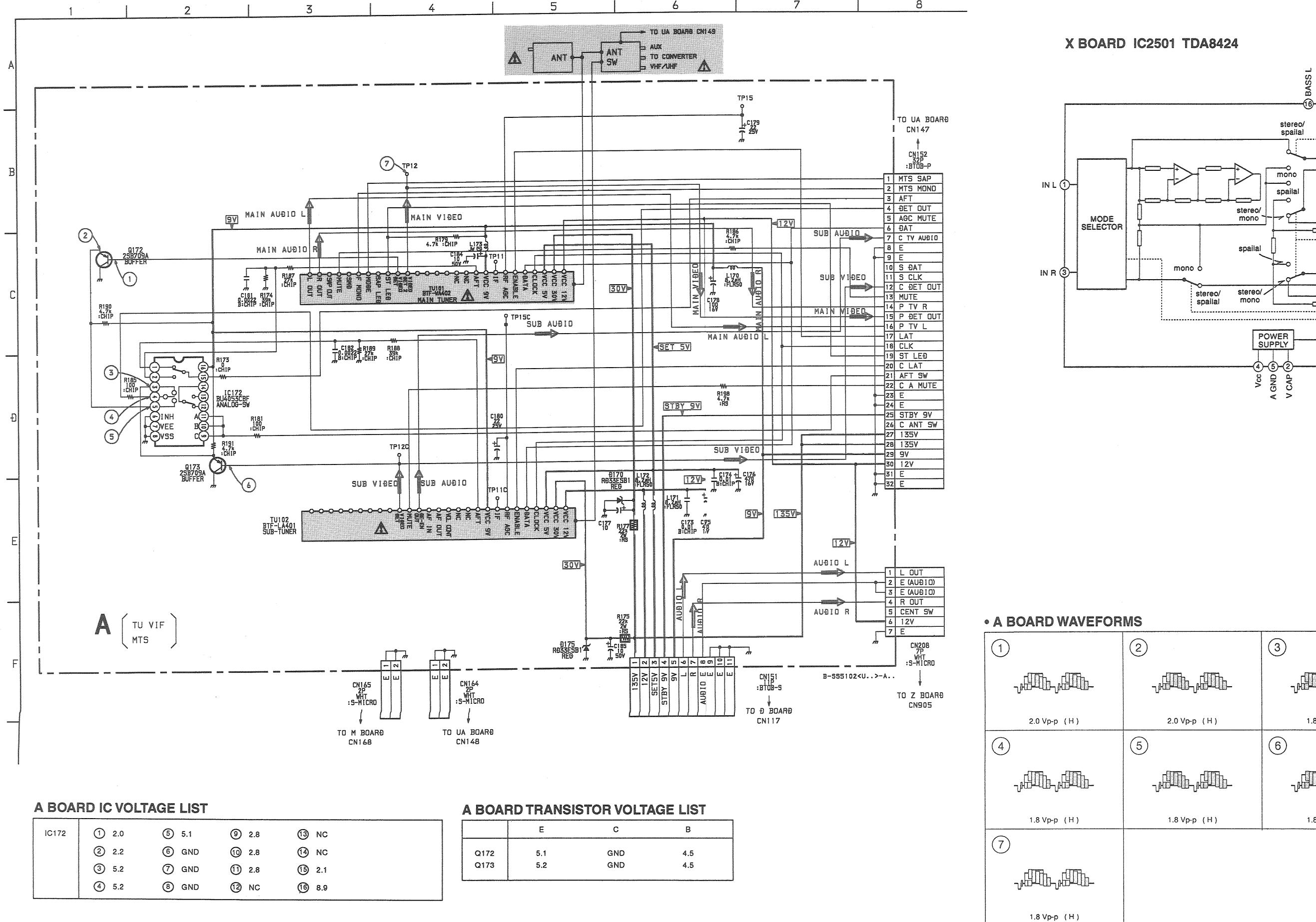
PA BOARD IC3210 AN5860



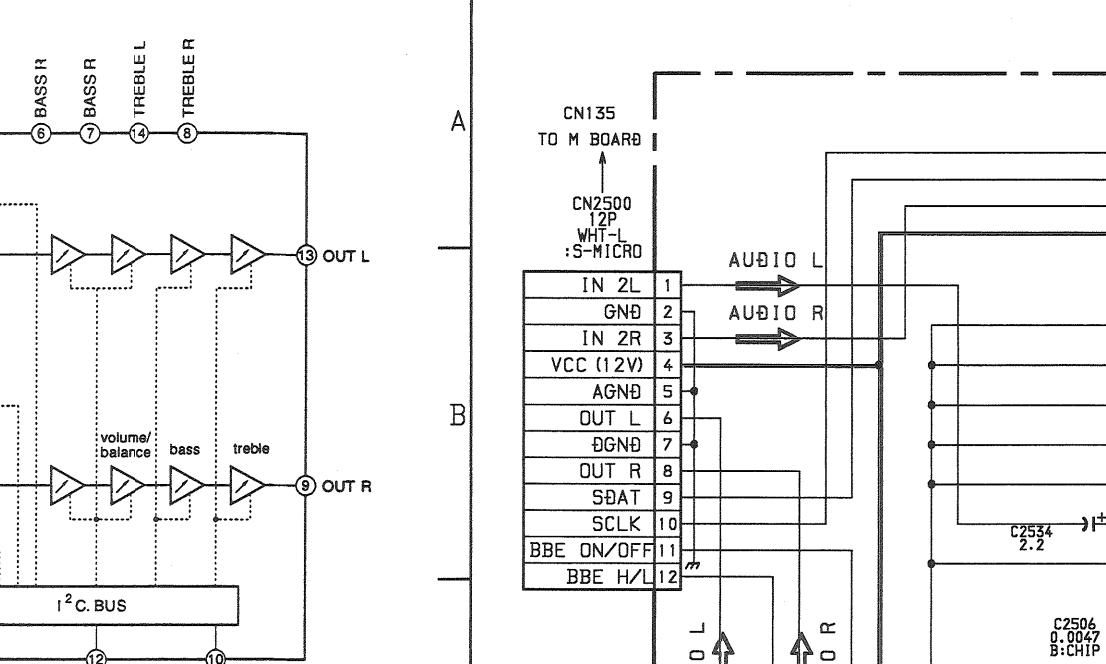
- PA BOARD - (Component Side)



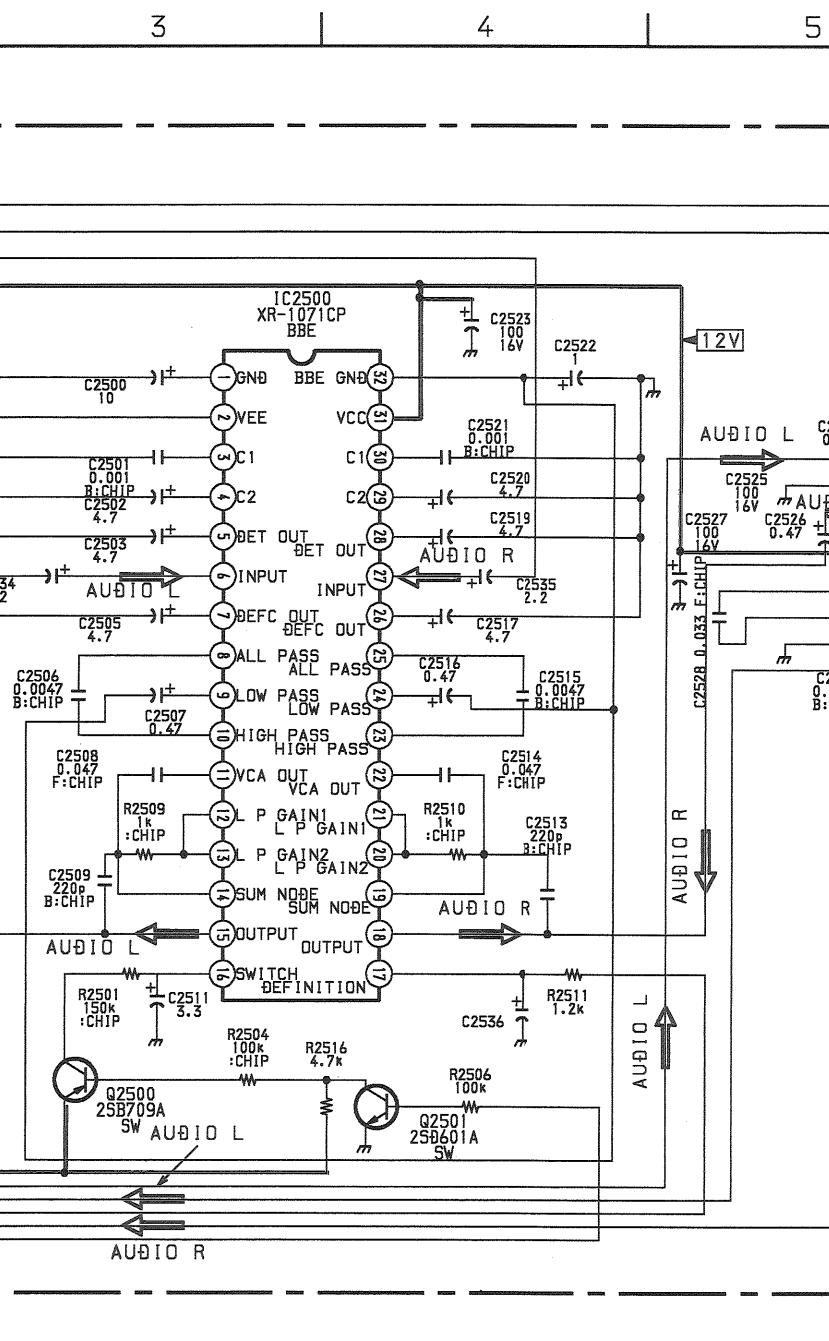
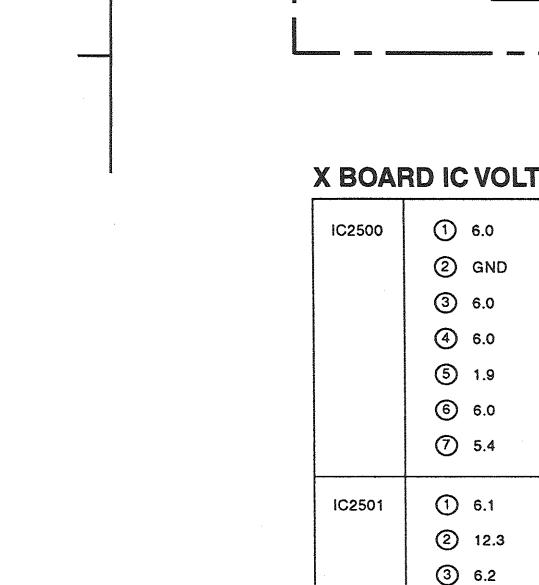
Note:
 * : Pattern from the side which enables seal
 ** : Pattern of the rear side.



X BOARD IC2501 TDA8424



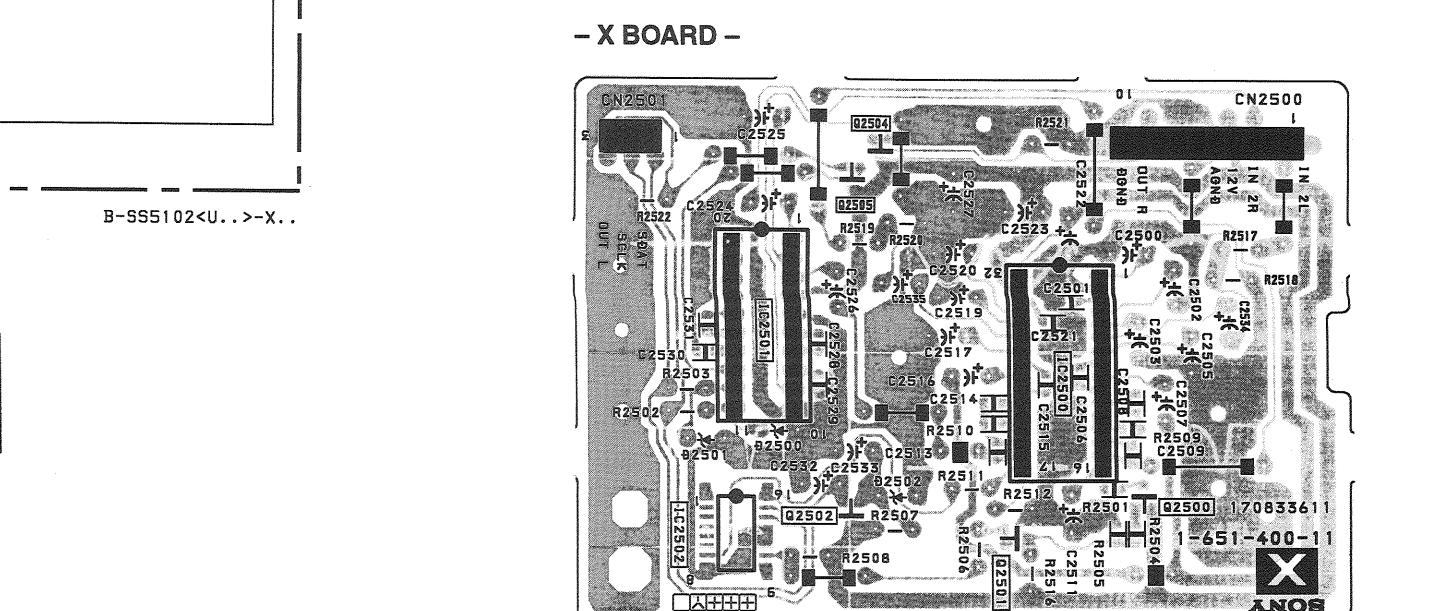
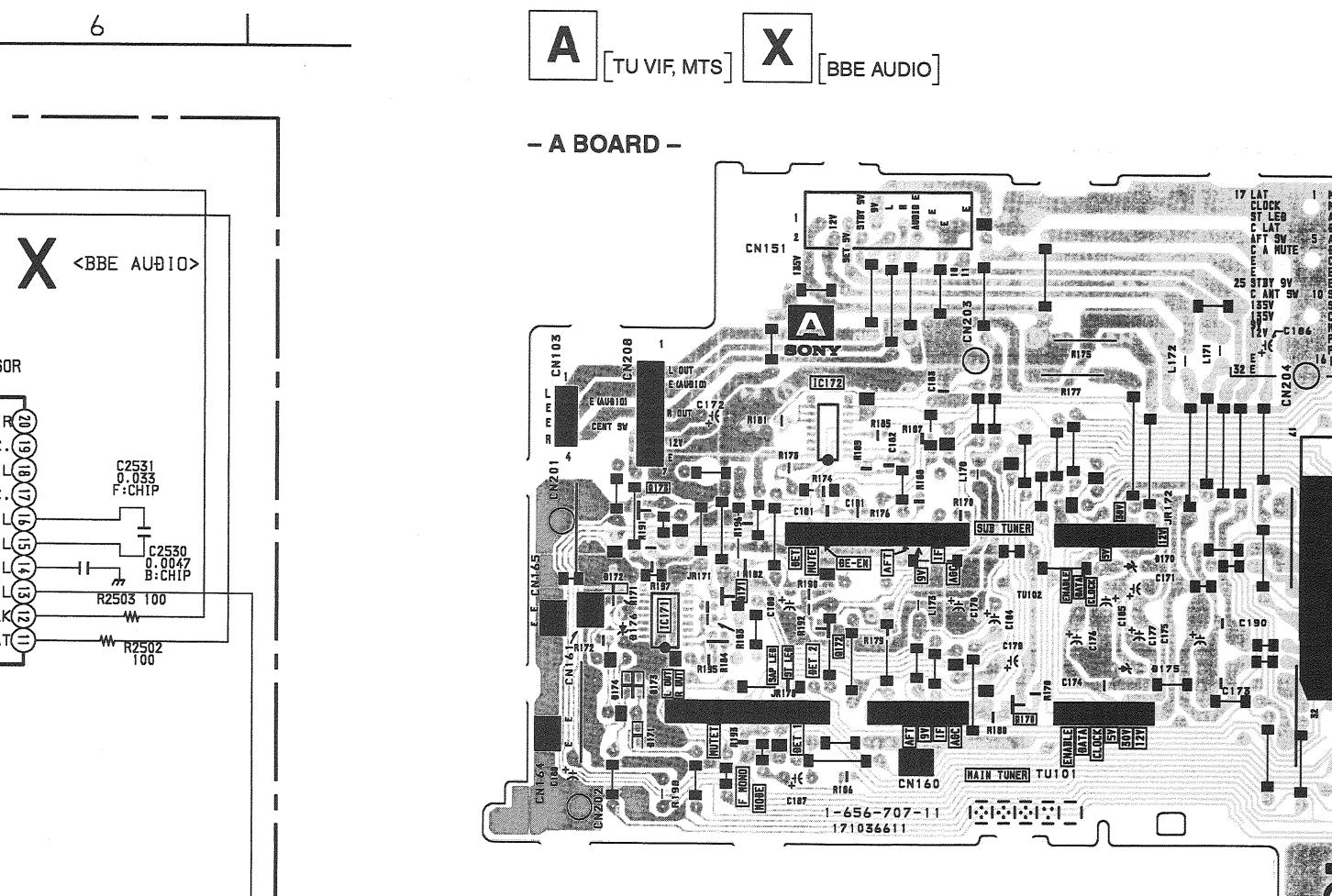
A BOARD WAVEFORMS



X BOARD IC VOLTAGE LIST			
IC2500	① 6.0	⑧ 6.0	⑯ 6.0
	② GND	⑨ 6.6	⑰ 6.0
	③ 6.0	⑩ 6.0	⑱ 5.9
	④ 6.0	⑪ 6.0	⑲ 6.0
	⑤ 1.9	⑫ 6.0	⑳ 12.4
	⑥ 6.0	⑬ 6.0	㉑ 6.0
	⑦ 5.4	⑭ 6.0	㉒ 5.4
IC2501	① 6.1	⑤ GND	⑯ 6.2
	② 12.3	⑥ 0	⑰ 6.2
	③ 6.2	⑦ 6.2	⑱ 5.0
	④ 12.4	⑧ 6.2	⑲ 5.1

X BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q2500	12.4	12.4	11.7
Q2501	GND	0.2	0.8



Schematic diagrams
← A X boards →

(32 inch only)

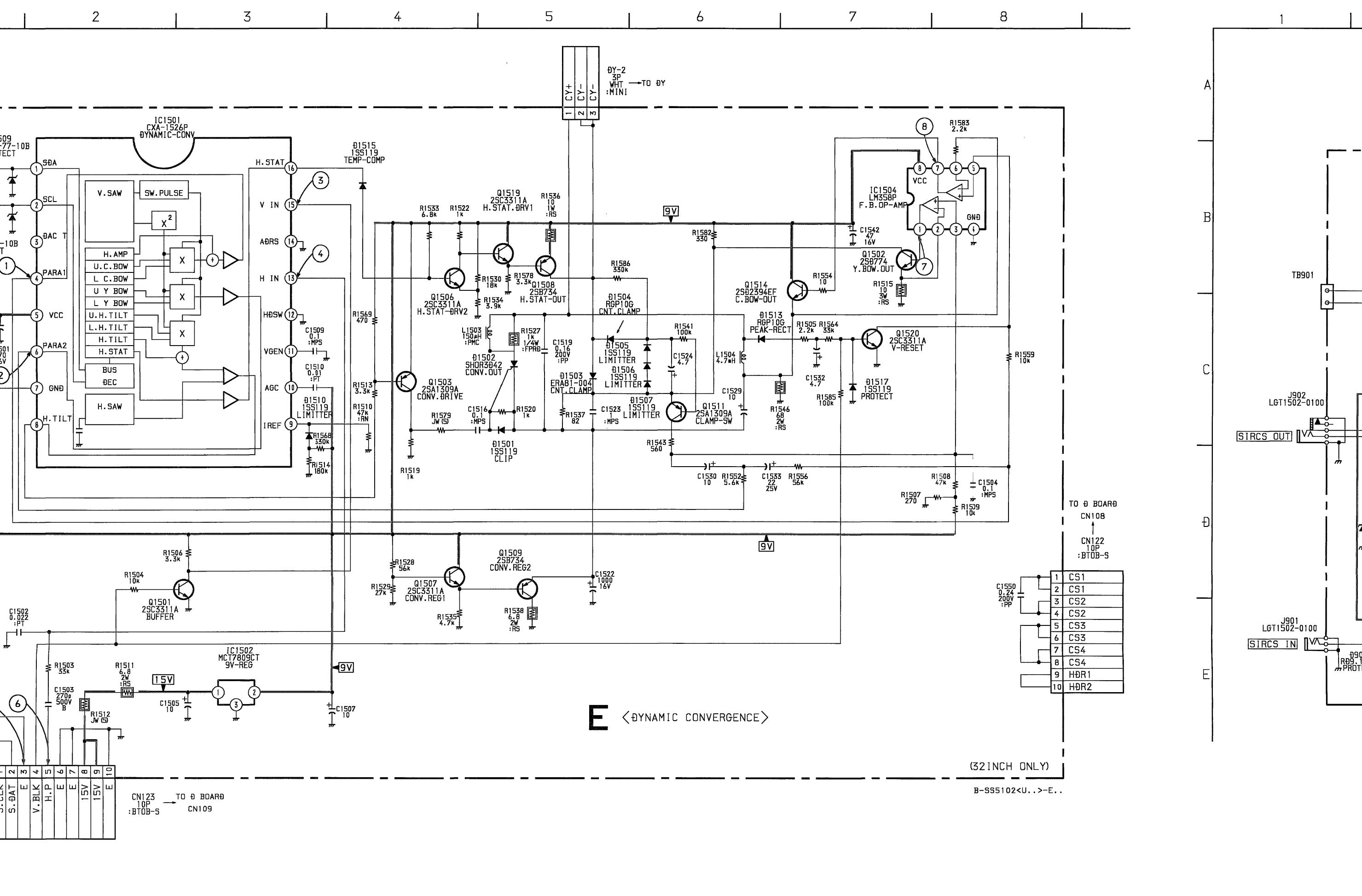
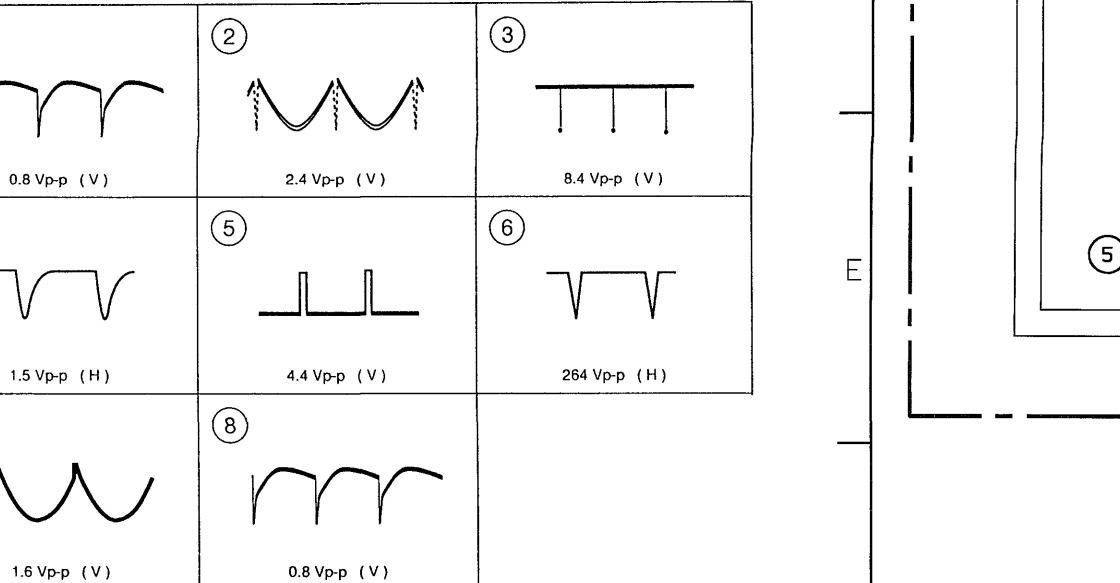
E BOARD IC VOLTAGE LIST

IC1501	① 5.0	⑤ 8.9	⑨ 2.0	⑬ 4.6
	② 5.0	⑥ 3.1	⑩ 4.6	⑭ GND
	③ NC	⑦ GND	⑪ 5.1	⑮ 8.0
	④ 4.8	⑧ 5.5	⑫ GND	⑯ 4.2
IC1502	① 14.5	② 9.2	③ GND	
IC1504	① 1.5	③ 0.8	⑤ 4.8	⑦ 5.4
	② 0.8	④ GND	⑥ 4.8	⑧ 9.2

E BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q1501	GND	8.0	0.3
Q1502	0.8	4.3	1.5
Q1503	0.2	7.6	8.9
Q1506	4.2	8.4	4.9
Q1507	2.4	9.2	3.0
Q1508	8.4	4.6	7.8
Q1509	3.1	0.6	2.4
Q1511	4.3	0.9	3.7
Q1514	4.8	9.2	5.4
Q1519	7.8	9.2	8.4
Q1520	GND	4.8	-0.5

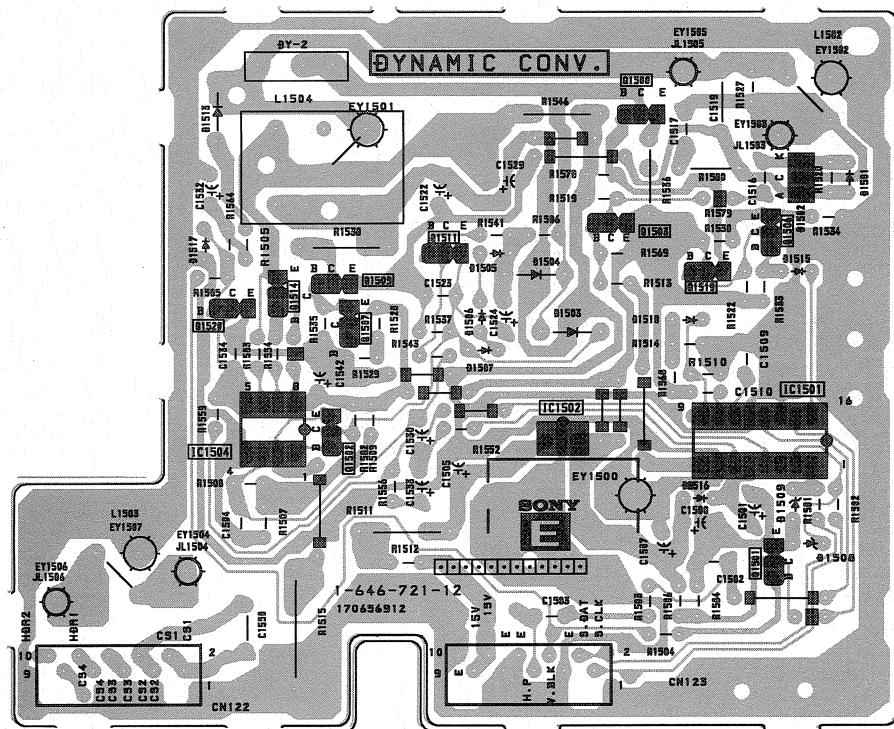
• E BOARD WAVEFORMS



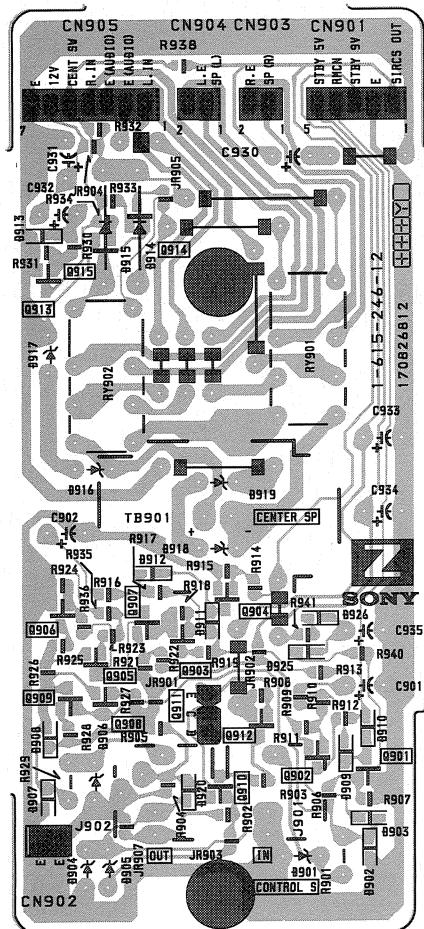
EDYNAMIC,
CONVERGENCE**Z**

SIRCS IN/OUT

- E BOARD - (32 inch only)



- Z BOARD -



DF

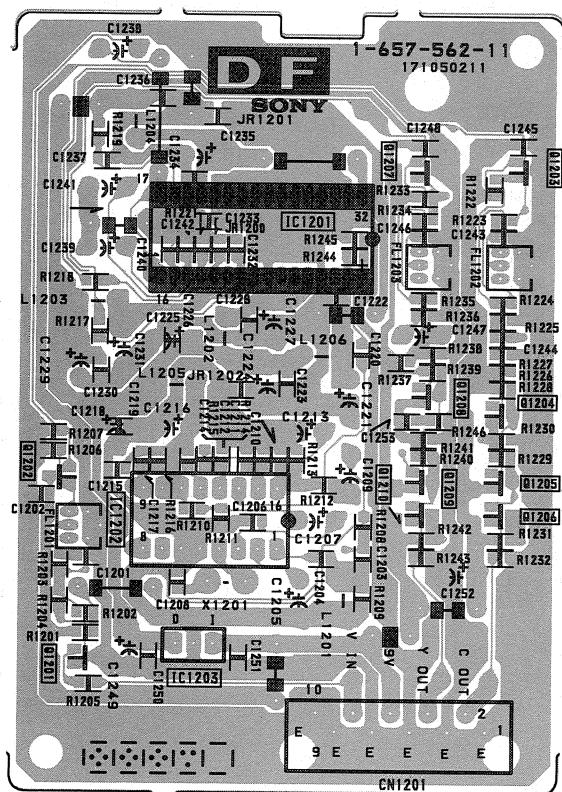
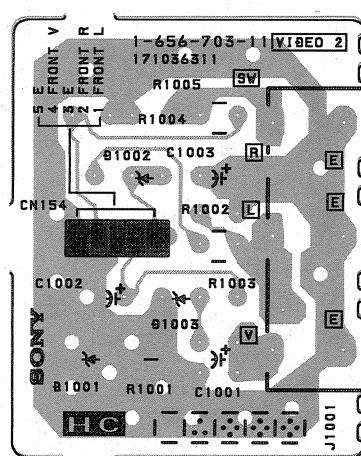
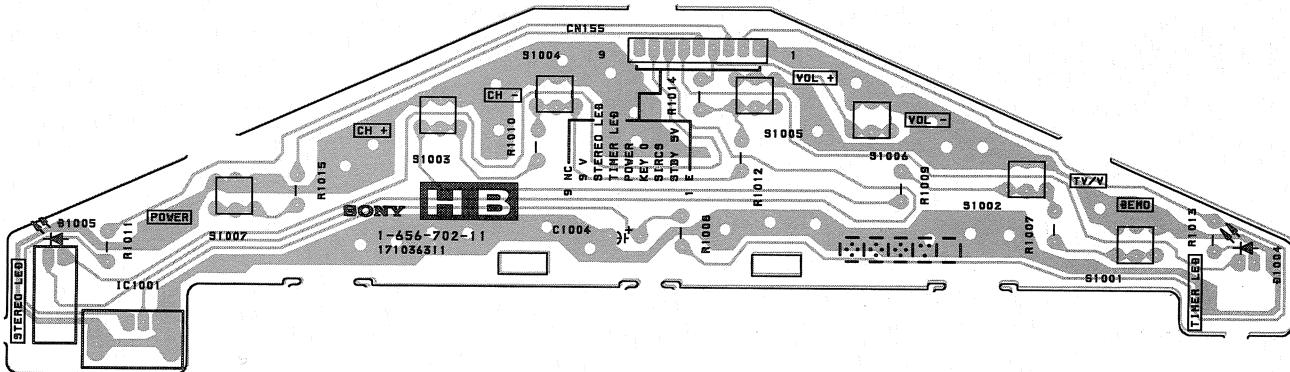
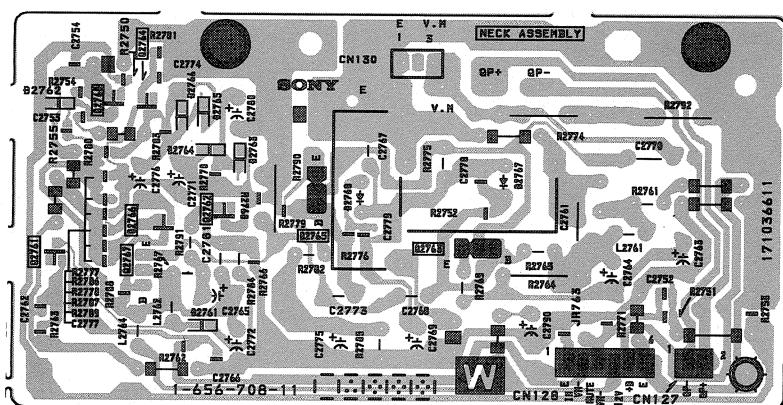
COMB-FILTER

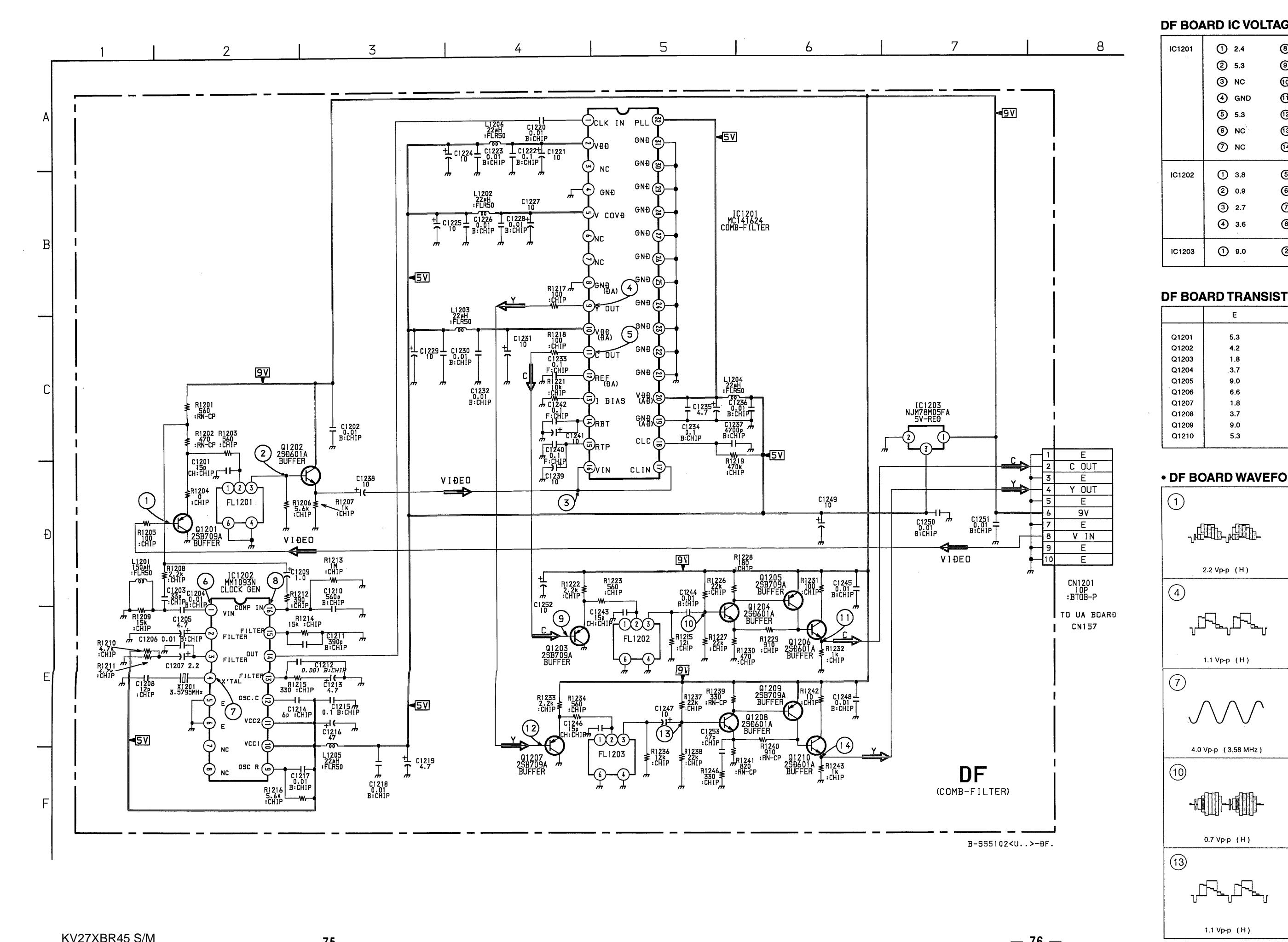
HC

USER CONTROL

HB

USER CONTROL

WVELOCITY,
MODULATION**- DF BOARD -****- HC BOARD -****- HB BOARD -****- W BOARD -**



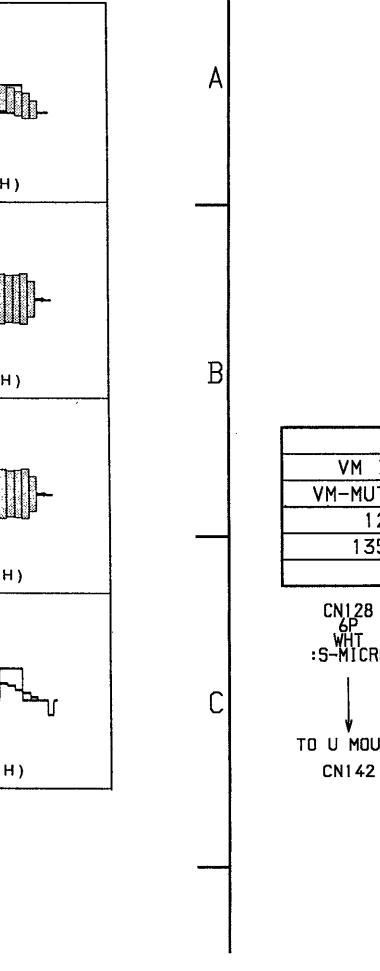
DF BOARD IC VOLTAGE LIST

IC1201	① 2.4	⑥ GND	⑪ 3.2	⑯ GND
	② 5.3	⑦ 1.2	⑫ 2.2	⑰ GND
	③ NC	⑧ 5.3	⑯ 2.2	⑲ GND
	④ GND	⑩ 1.1	⑯ 2.6	⑳ GND
	⑤ 5.3	⑫ 1.7	⑯ GND	㉑ 5.3
	⑥ NC	⑬ 1.4	⑯ GND	㉒ GND
	⑦ NC	⑭ 1.2	⑯ GND	㉓ GND
IC1202	① 3.8	⑤ GND	⑯ 3.7	⑯ 2.4
	② 0.9	⑥ GND	⑯ 5.3	⑯ 3.4
	③ 2.7	⑦ NC	⑯ 5.3	⑯ 0.6
	④ 3.6	⑧ NC	⑯ 3.5	⑯ 2.6
IC1203	① 9.0	② GND	③ 5.3	

DF BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q1201	5.3	GND	4.7
Q1202	4.2	9.0	4.9
Q1203	1.8	GND	1.0
Q1204	3.7	8.3	4.4
Q1205	9.0	7.3	8.3
Q1206	6.6	8.3	7.3
Q1207	1.8	GND	1.1
Q1208	3.7	8.3	4.4
Q1209	9.0	5.9	8.3
Q1210	5.3	8.9	5.9

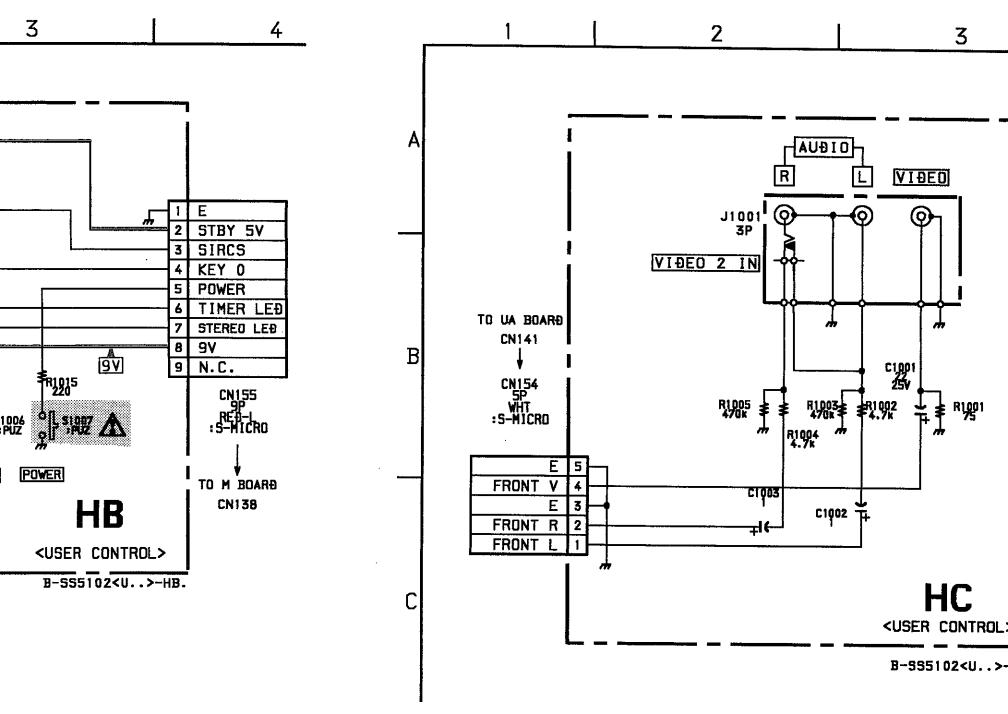
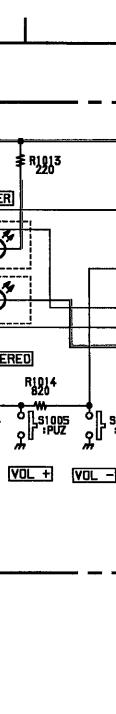
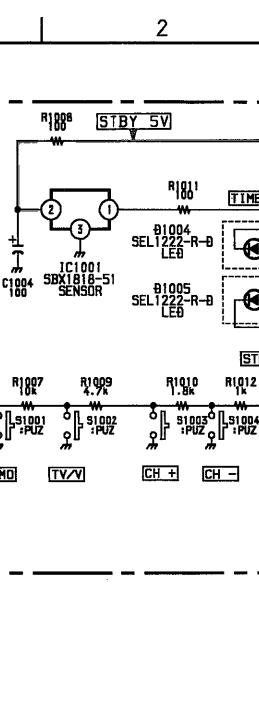
• DF BOARD WAVEFORMS



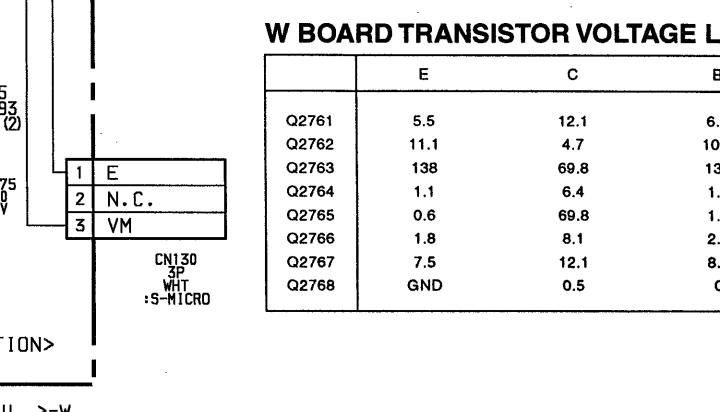
DF BOARD IC VOLTAGE LIST

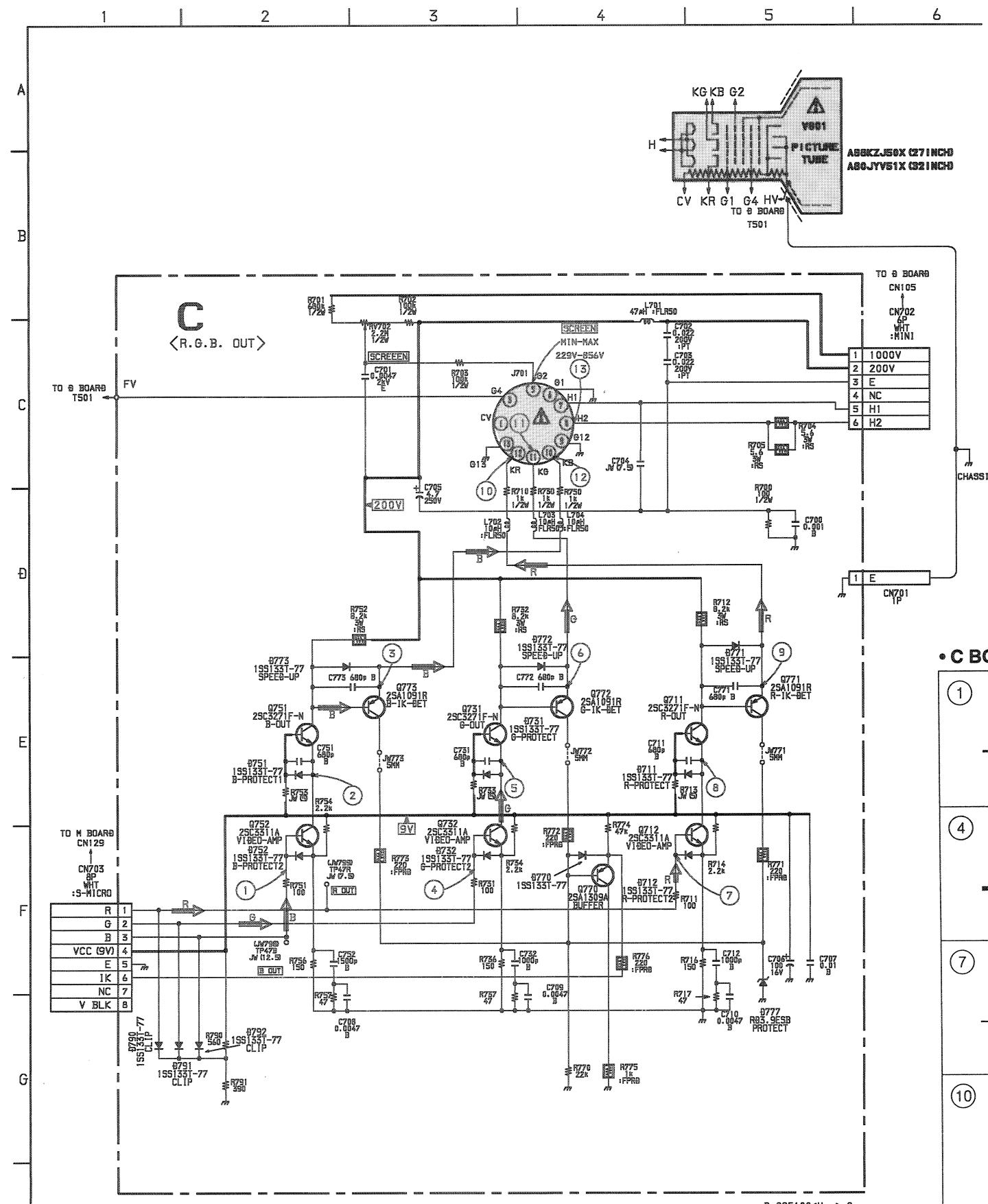
IC1201	CHROMA IN	ACC FILTER	APC1 FILTER	X'TAL	GND1	GND2	fsc OUT	OSC C	Vcc 2	Vcc 1	OSC R	NC
	COMP IN	Y IN	Y IN	SEL194 R-B	R1004	R1005	STBY 5V	STBY 5V	9V	9V		
	COMP IN	Y IN	Y IN	SEL195 R-B	R1006	R1007	STBY 5V	STBY 5V	9V	9V		
	COMP IN	Y IN	Y IN	SEL196 R-B	R1008	R1009	STBY 5V	STBY 5V	9V	9V		

DF BOARD IC1202 MM1093ND



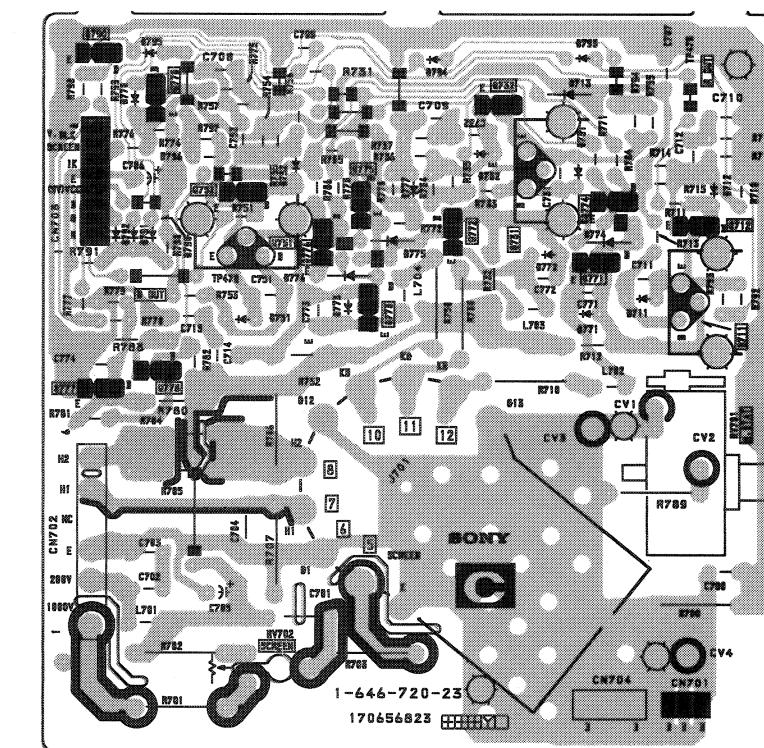
	E	C	B
Q2761	5.5	12.1	6.1
Q2762	11.1	4.7	10.5
Q2763	138	69.8	137
Q2764	1.1	6.4	1.8
Q2765	0.6	69.8	1.0
Q2766	1.8	8.1	2.4
Q2767	7.5	12.1	8.1
Q2768	GND	0.5	0



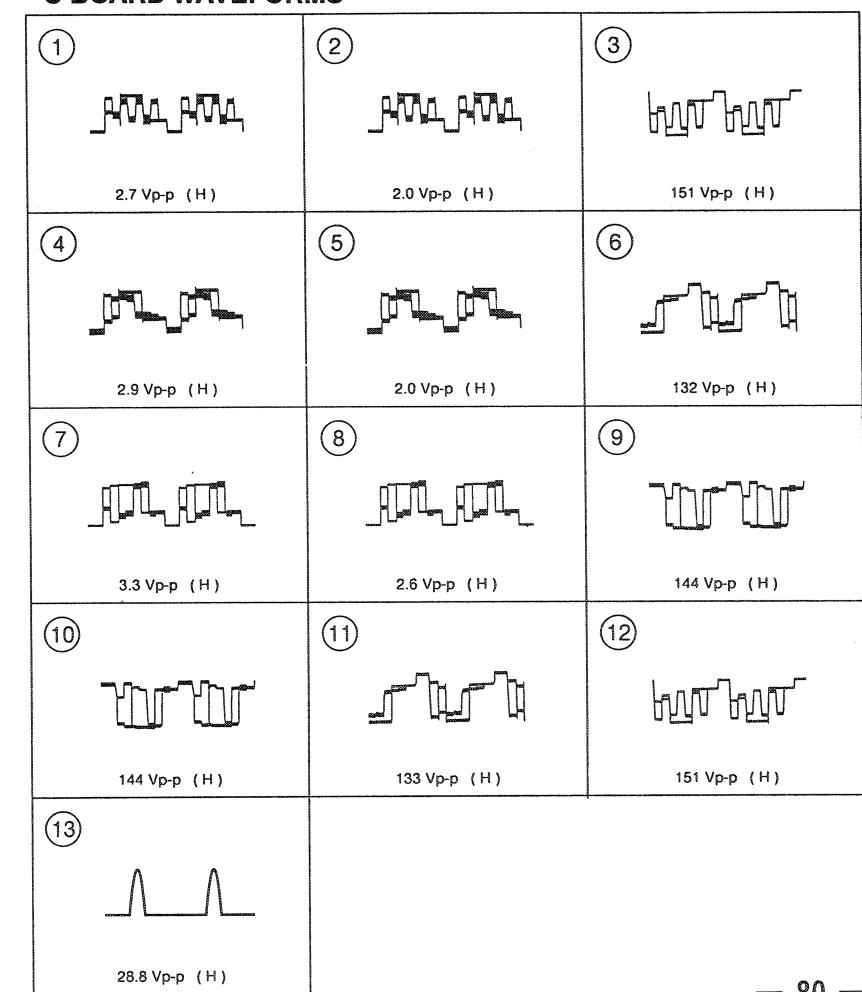


C R. G. B. OUT

- C BOARD -



• C BOARD WAVEFORMS



C BOARD TRANSISTOR VOLTAGE LIST

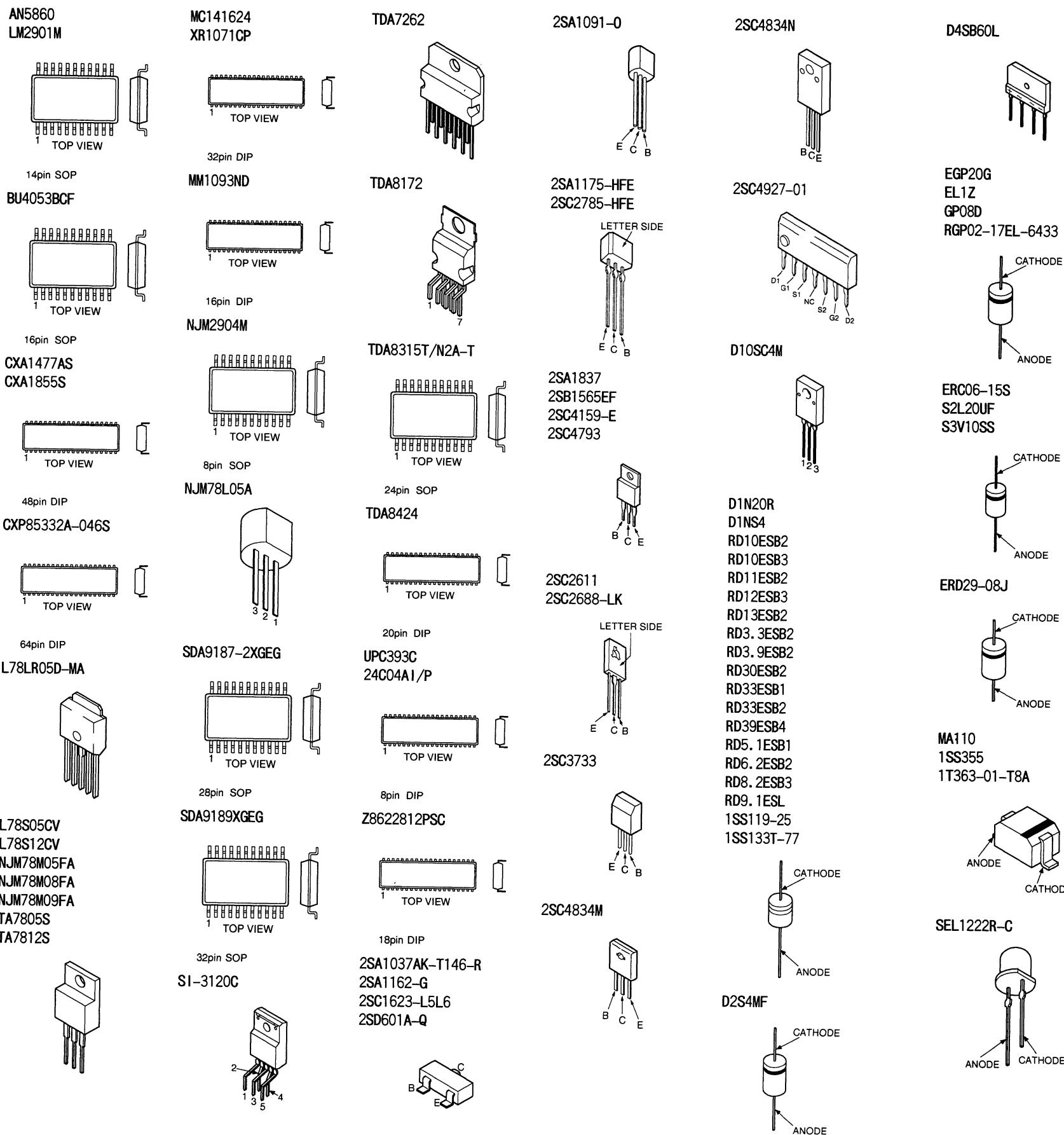
	E	C	B
Q711	8.5	163	9.1
Q712	1.4	8.5	1.8
Q731	8.5	160	9.1
Q732	1.5	8.5	2.0
Q751	8.5	146	9.1
Q752	1.4	8.5	1.9
Q770	2.7	0.7	2.2
Q771	161	2.3	163
Q772	158	2.3	160
Q773	144	2.6	146

Schematic diagrams

← DF HB boards

Schematic diagrams

4-4. SEMICONDUCTORS



SECTION 5

EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

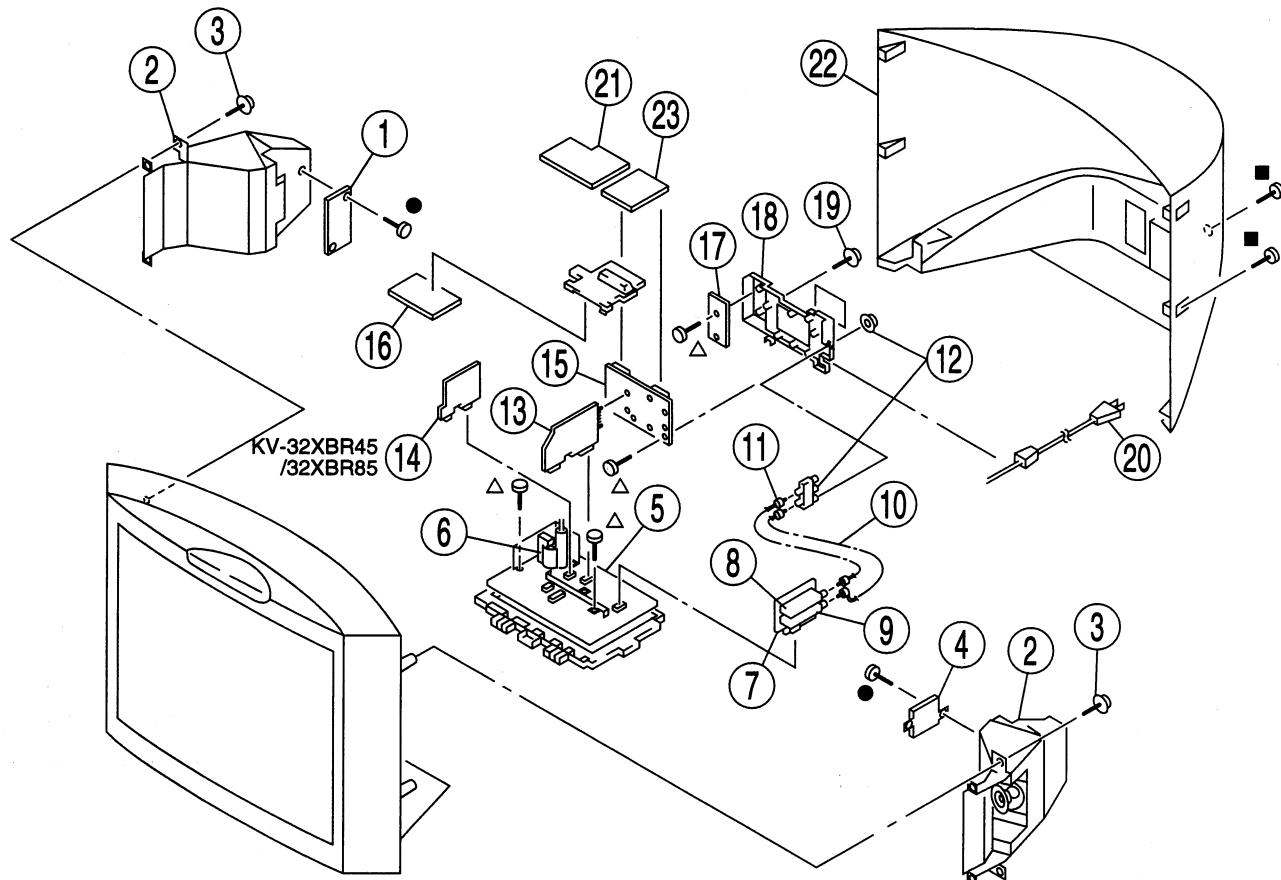
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

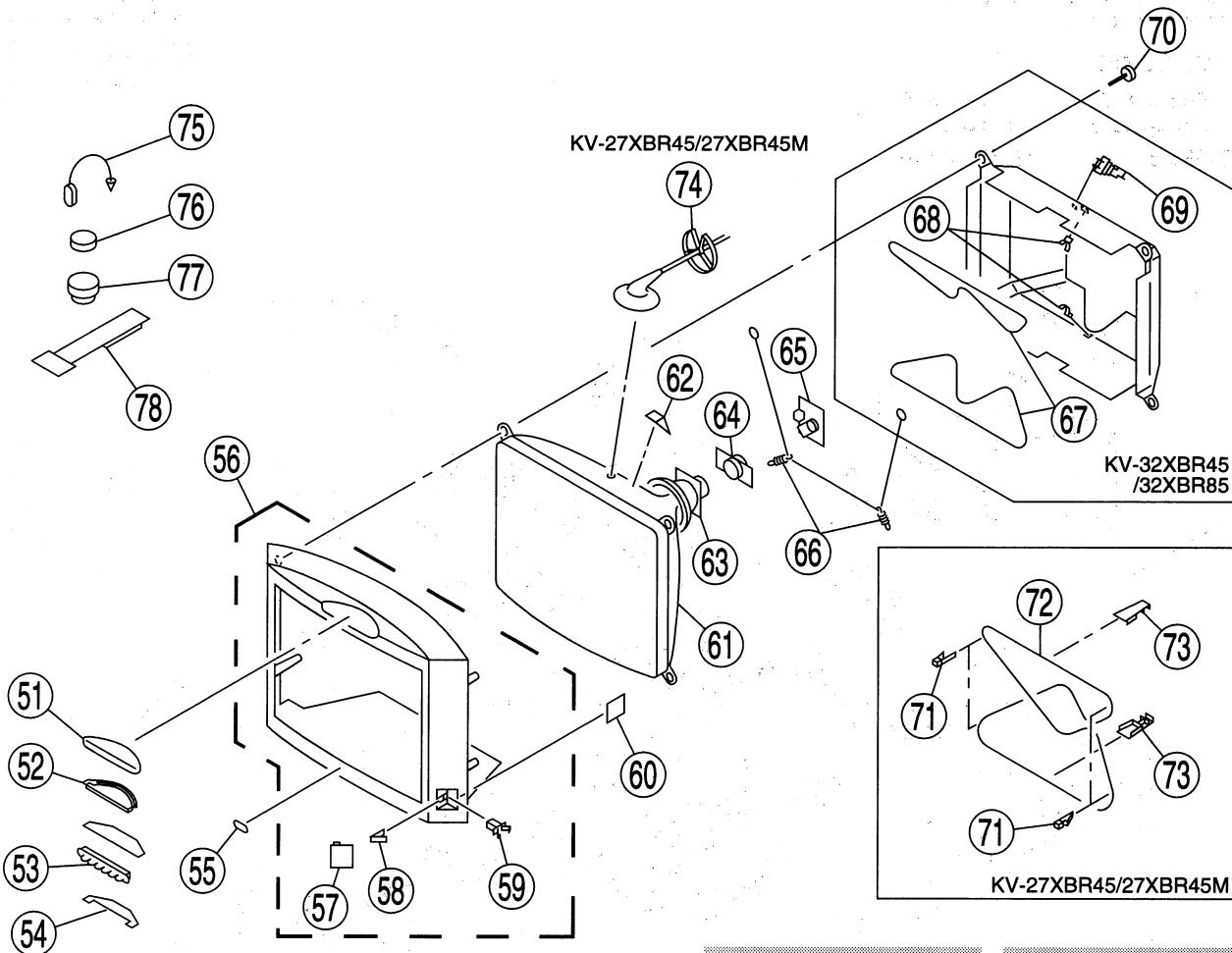
5-1. CHASSIS

- : 7-685-648-79 +BVTP 3X12
- Δ : 7-685-661-14 +BVTP 4X12
- : 7-685-663-79 +BVTP 4X16



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	* A-1372-122-A	W BOARD, COMPLETE		11	* 1-751-135-11	CABLE, PIN	
2	1-504-322-11	BOX, SPEAKER (10CM.5CM) (KV-27XBR45/27XBR45M)		12	1-417-178-11	SELECTOR, ANTENNA (AS-2)	
	1-504-322-21	BOX, SPEAKER (10CM.5CM) (KV-32XBR45/32XBR85)		13	* A-1306-512-A	M BOARD, COMPLETE	
3	4-384-096-01	SCREW (4X16), TAPPING, +P		14	* A-1343-014-A	E BOARD, COMPLETE	
4	8-913-821-90	TRANSMITTER TMR-D1002 SET		15	* A-1394-659-A	U BOARD, COMPLETE	(KV-32XBR45/32XBR85)
5	* A-1346-334-A	D BOARD, COMPLETE (KV-27XBR45/27XBR45M)		16	* A-1390-514-A	X BOARD, COMPLETE	
	* A-1346-331-A	D BOARD, COMPLETE (KV-32XBR45/32XBR85)		17	* A-1390-515-A	Z BOARD, COMPLETE	
6	Δ 1-453-146-11	TRANSFORMER ASSY, FLYBACK (NK-2604A3)		18	4-039-517-21	PANEL, ANTENNA TERMINAL	
7	* A-1297-519-A	A BOARD, COMPLETE		19	4-382-854-11	SCREW (M3X10), P, SW (+)	
8	Δ 8-598-254-00	TUNER, BTF-WA402		20	Δ 1-751-059-11	CORD, POWER (WITH CONNECTOR) (10A/125V)	
9	Δ 8-598-047-11	TUNER, ET BTF-LA401		21	* A-1195-095-A	PA BOARD, COMPLETE	
10	* 1-751-136-11	CABLE, PIN		22	4-048-237-01	COVER, REAR (KV-27XBR45/27XBR45M)	
					4-048-239-01	COVER, REAR (KV-32XBR45/32XBR85)	
				23	* A-1341-957-A	DF BOARD, COMPLETE	

5-2. PICTURE TUBE



The components identified by shading and mark \triangle are critical for safety.
Replace only with part number specified.

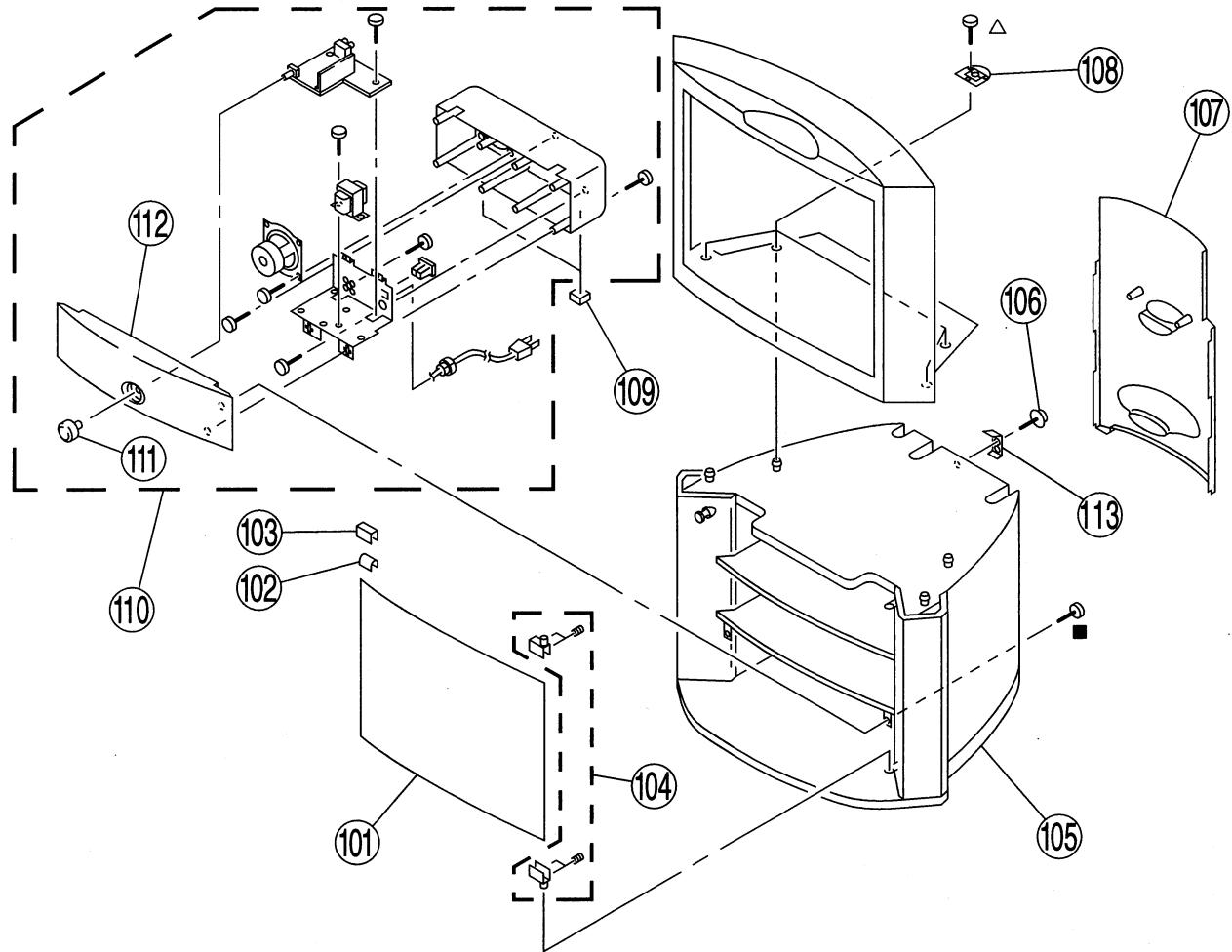
Les composants identifiés par une trame et une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF. NO.	PART NO.	DESCRIPTION	REMARK
51	4-048-240-01	PANEL, CONTROL	
52	4-048-241-01	BUTTON, MULTI	
53	8-913-823-90	LUMINOUS UNIT IFP-D1002 SET	
54	* A-1372-120-A	HB BOARD, COMPLETE	
55	3-704-179-31	EMBLEM (NO.9), SONY	
56	X-4032-887-1	BEZNET ASSY (KV-32XBR45/32XBR85)	57-59
	X-4032-886-1	BEZNET ASSY (KV-27XBR45/27XBR45M)	57-59
57	4-048-250-01	DOOR	
58	4-049-533-01	DOOR, SPRING	
59	4-392-036-01	CATCHER, PUSH	
60	* A-1372-121-A	HC BOARD, COMPLETE	
61	A. 8-733-848-05	PICTURE TUBE 29PXD (A68KZJ50X) (KV-27XBR45/27XBR45M)	
	A. 8-451-275-42	PICTURE TUBE 29PXD (A68KZJ50X) (KV-27XBR45/27XBR45M)	
	A. 8-733-741-05	PICTURE TUBE 39PXD (A80JYV51X) (KV-32XBR45/32XBR85)	
62	4-041-361-01	SPACER, DEFLECTION YOKE	
63	A. 8-451-275-42	DEFLECTION YOKE (Y28PFA) (VTM) (KV-27XBR45/27XBR45M)	
	A. 8-451-315-41	DEFLECTION YOKE (Y34FXA) (VTM) (KV-32XBR45/32XBR85)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
64	\triangle 1-452-509-42	NECK ASSY, PICTURE TUBE (NA-308) (KV-27XBR45/27XBR45M)	
	\triangle 1-452-579-21	NECK ASSY, PICTURE TUBE (NA322) (KV-32XBR45/32XBR85)	
65	* A-1331-436-A	C BOARD, COMPLETE	
66	4-036-329-01	SPRING (B), TENSION	
67	\triangle 1-402-952-12	COIL, GEGAUSSING (KV-32XBR45/32XBR85)	
68	* 4-371-629-01	STOPPER, WIRE	(KV-32XBR45/32XBR85)
69	4-033-681-01	HOLDER, LEAD	(KV-32XBR45/32XBR85)
70	4-041-268-01	SCREW (7), TAPPING	
71	4-040-388-01	HOLDER (S), DGC	(KV-27XBR45/27XBR45M)
72	\triangle 1-406-726-13	COIL, DEGAUSSING (KV-27XBR45/27XBR45M)	
73	4-040-387-01	HOLDER (M), DGC (KV-27XBR45/27XBR45M)	
74	3-704-372-31	HOLDER, HV CABLE (KV-27XBR45/27XBR45M)	
75	4-308-870-00	CLIP, LEAD WIRE	
76	1-452-032-00	MAGNET,DISC ; 10mm ϕ	
77	1-452-094-00	MAGNET, ROTATABLE DISK : 15mm ϕ	
78	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	

5-3. CABINET BASE [KV-32XBR85]

△ : 7-685-661-14 +BVTP 4X12
 ■ : 7-685-663-79 +BVTP 4X16



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
101	4-049-526-01	DOOR, GLASS		108	X-4032-889-1	CLAMP ASSY	
102	2-352-981-01	SPACER		109	4-049-527-01	FOOT, WOOFER	
103	2-359-505-01	RETAINER, MAGNET		110	1-550-910-21	WOOFER, ACTIVE SUPER	111, 112
104	4-049-536-01	HINGE SET		111	4-048-244-01	KNOB, WOOFER	
105	* X-4032-888-1	BASE ASSY, CABINET		112	4-048-246-01	COVER, WOOFER	
106	4-041-164-11	SCREW (4X20), TAPPING		113	4-049-530-01	BRACKET, REAR	
107	4-048-245-01	PANEL, BACK					

SECTION 6

ELECTRICAL PARTS LIST

PA

NOTE:

Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark are critical for safety. Replace only with part number specified.

- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

• CAPACITORS

PF : μF

- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
* A-1195-095-A	PA BOARD, COMPLETE		*****	C3250	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
<CAPACITOR>								
C3201	1-126-967-11	ELECT	47 μF 20%	16V	C3251	1-164-346-11	CERAMIC CHIP 1 μF	16V
C3202	1-126-967-11	ELECT	47 μF 20%	16V	C3252	1-163-038-91	CERAMIC CHIP 0.1 μF	25V
C3203	1-126-967-11	ELECT	47 μF 20%	16V	C3253	1-126-967-11	ELECT 47 μF	20% 16V
C3204	1-126-967-11	ELECT	47 μF 20%	16V	C3254	1-126-967-11	ELECT 47 μF	20% 16V
C3205	1-126-967-11	ELECT	47 μF 20%	16V	C3255	1-164-346-11	CERAMIC CHIP 1 μF	16V
C3206	1-164-346-11	CERAMIC CHIP 1 μF	16V	C3256	1-163-017-00	CERAMIC CHIP 0.0047 μF	10% 50V	
C3207	1-163-017-00	CERAMIC CHIP 0.0047 μF	10% 50V	C3257	1-164-004-11	CERAMIC CHIP 0.1 μF	10% 25V	
C3208	1-164-004-11	CERAMIC CHIP 0.1 μF	10% 25V	C3258	1-124-903-11	ELECT 1 μF	20% 50V	
C3209	1-124-903-11	ELECT 1 μF	20% 50V	C3259	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3210	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3260	1-126-967-11	ELECT 47 μF	20% 16V	
C3211	1-126-967-11	ELECT 47 μF	20% 16V	C3261	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3212	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3262	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	
C3213	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C3263	1-164-004-11	CERAMIC CHIP 0.1 μF	10% 25V	
C3214	1-164-004-11	CERAMIC CHIP 0.1 μF	10% 25V	C3264	1-163-017-00	CERAMIC CHIP 0.0047 μF	10% 50V	
C3215	1-163-017-00	CERAMIC CHIP 0.0047 μF	10% 50V	C3265	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3216	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3266	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3217	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3267	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3218	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3268	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3219	1-164-005-11	CERAMIC CHIP 0.47 μF	25V	C3269	1-164-005-11	CERAMIC CHIP 0.47 μF	25V	
C3220	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3270	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	
C3221	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	C3271	1-164-343-11	CERAMIC CHIP 0.056 μF	10% 25V	
C3222	1-164-343-11	CERAMIC CHIP 0.056 μF	10% 25V	C3272	1-163-275-11	CERAMIC CHIP 0.001 μF	5% 50V	
C3223	1-163-275-11	CERAMIC CHIP 0.001 μF	5% 50V	C3273	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3224	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3274	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3225	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3275	1-164-336-11	CERAMIC CHIP 0.33 μF	25V	
C3226	1-164-336-11	CERAMIC CHIP 0.33 μF	25V	C3276	1-126-933-11	ELECT 100 μF	20% 10V	
C3227	1-126-933-11	ELECT 100 μF	20% 10V	C3277	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3228	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3278	1-164-161-11	CERAMIC CHIP 0.0022 μF	10% 50V	
C3229	1-164-161-11	CERAMIC CHIP 0.0022 μF	10% 50V	C3279	1-126-967-11	ELECT 47 μF	20% 16V	
C3230	1-126-967-11	ELECT 47 μF	20% 16V	C3280	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3231	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3281	1-124-903-11	ELECT 1 μF	20% 50V	
C3232	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3282	1-124-903-11	ELECT 1 μF	20% 50V	
C3233	1-124-903-11	ELECT 1 μF	20% 50V	C3283	1-124-903-11	ELECT 1 μF	20% 50V	
C3234	1-124-903-11	ELECT 1 μF	20% 50V	C3284	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3235	1-124-903-11	ELECT 1 μF	20% 50V	C3285	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3236	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3286	1-164-004-11	CERAMIC CHIP 0.1 μF	10% 25V	
C3237	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3287	1-126-967-11	ELECT 47 μF	20% 16V	
C3238	1-164-004-11	CERAMIC CHIP 0.1 μF	10% 25V	C3288	1-163-249-11	CERAMIC CHIP 82PF	5% 50V	
C3239	1-126-967-11	ELECT 47 μF	20% 16V	C3289	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	
C3240	1-163-249-11	CERAMIC CHIP 82PF	5% 50V	C3290	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	
<FILTER BLOCK>								
C3241	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CM3201	1-467-554-21	FILTER BLOCK, COMB		
C3242	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	C3291	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	
C3243	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	C3292	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	
C3244	1-163-235-11	CERAMIC CHIP 22PF	5% 50V					
C3245	1-126-967-11	ELECT 47 μF	20% 16V					
<CONNECTOR>								
C3246	1-164-346-11	CERAMIC CHIP 1 μF	16V	CN3201	1-573-297-21	CONNECTOR, BOARD TO BOARD 18P		
C3247	1-163-038-91	CERAMIC CHIP 0.1 μF	25V	CN3202	* 1-564-509-11	PLUG, CONNECTOR 6P		
C3248	1-164-346-11	CERAMIC CHIP 1 μF	16V					
C3249	1-164-346-11	CERAMIC CHIP 1 μF	16V					

PA

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<DIODE>							
D3201	8-719-404-46	DIODE MA110		Q3216	8-729-216-22	TRANSISTOR 2SA1162-G	
D3202	8-719-404-46	DIODE MA110		Q3217	8-729-216-22	TRANSISTOR 2SA1162-G	
D3203	8-719-404-46	DIODE MA110		Q3218	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q3219	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q3220	8-729-216-22	TRANSISTOR 2SA1162-G	
<FERRITE BEAD>							
FB3201	1-412-911-11	INDUCTOR, FERRITE BEAD		R3201	1-216-075-00	METAL GLAZE 12K	5% 1/10W
FB3202	1-412-911-11	INDUCTOR, FERRITE BEAD		R3202	1-216-041-00	METAL GLAZE 470	5% 1/10W
FB3203	1-412-911-11	INDUCTOR, FERRITE BEAD		R3203	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
FB3204	1-412-911-11	INDUCTOR, FERRITE BEAD		R3205	1-216-049-91	METAL GLAZE 1K	5% 1/10W
FB3205	1-412-911-11	INDUCTOR, FERRITE BEAD		R3206	1-216-097-91	METAL GLAZE 100K	5% 1/10W
FB3206	1-412-911-11	INDUCTOR, FERRITE BEAD		R3207	1-216-113-00	METAL GLAZE 470K	5% 1/10W
FB3207	1-412-911-11	INDUCTOR, FERRITE BEAD		R3208	1-216-041-00	METAL GLAZE 470	5% 1/10W
<FILTER>							
FL3201	1-236-728-11	ENCAPSULATED COMPONENT		R3209	1-216-043-91	METAL GLAZE 560	5% 1/10W
FL3202	1-236-728-11	ENCAPSULATED COMPONENT		R3210	1-216-041-00	METAL GLAZE 470	5% 1/10W
FL3203	1-236-728-11	ENCAPSULATED COMPONENT		R3211	1-216-043-91	METAL GLAZE 560	5% 1/10W
<IC>							
IC3201	8-759-701-58	IC NJM78M08FA		R3212	1-216-049-91	METAL GLAZE 1K	5% 1/10W
IC3204	8-759-295-76	IC TDA8315T/N2A-T		R3213	1-216-049-91	METAL GLAZE 1K	5% 1/10W
IC3205	8-759-248-15	IC SDA9187-2XGEG		R3214	1-216-049-91	METAL GLAZE 1K	5% 1/10W
IC3206	8-759-338-13	IC SDA9189XGEG		R3215	1-216-049-91	METAL GLAZE 1K	5% 1/10W
IC3207	8-759-295-76	IC TDA8315T/N2A-T		R3216	1-216-073-00	METAL GLAZE 10K	5% 1/10W
IC3208	8-759-248-15	IC SDA9187-2XGEG		R3217	1-216-073-00	METAL GLAZE 10K	5% 1/10W
IC3209	8-759-338-13	IC SDA9189XGEG		R3218	1-216-073-00	METAL GLAZE 10K	5% 1/10W
IC3210	8-759-420-58	IC AN5860		R3219	1-216-025-91	METAL GLAZE 100	5% 1/10W
<COIL>							
L3201	1-410-663-31	INDUCTOR 10μH		R3220	1-216-025-91	METAL GLAZE 100	5% 1/10W
L3203	1-410-470-11	INDUCTOR 10μH		R3221	1-216-025-91	METAL GLAZE 100	5% 1/10W
L3204	1-410-470-11	INDUCTOR 10μH		R3222	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
L3205	1-410-470-11	INDUCTOR 10μH		R3223	1-216-083-00	METAL GLAZE 27K	5% 1/10W
L3206	1-410-470-11	INDUCTOR 10μH		R3224	1-216-027-00	METAL GLAZE 120	5% 1/10W
L3207	1-410-470-11	INDUCTOR 10μH		R3225	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
L3208	1-410-470-11	INDUCTOR 10μH		R3226	1-216-045-00	METAL GLAZE 680	5% 1/10W
L3209	1-410-470-11	INDUCTOR 10μH		R3227	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
L3210	1-410-473-11	INDUCTOR 18μH		R3228	1-216-037-00	METAL GLAZE 330	5% 1/10W
L3211	1-410-470-11	INDUCTOR 10μH		R3229	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
L3212	1-410-470-11	INDUCTOR 10μH		R3230	1-216-105-91	METAL GLAZE 220K	5% 1/10W
L3213	1-410-470-11	INDUCTOR 10μH		R3233	1-216-295-91	CONDUCTOR, CHIP	
L3214	1-410-470-11	INDUCTOR 10μH		R3235	1-216-049-91	METAL GLAZE 1K	5% 1/10W
L3215	1-410-470-11	INDUCTOR 10μH		R3236	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
L3216	1-410-470-11	INDUCTOR 10μH		R3237	1-216-049-91	METAL GLAZE 1K	5% 1/10W
L3217	1-410-473-11	INDUCTOR 18μH		R3238	1-216-049-91	METAL GLAZE 1K	5% 1/10W
L3218	1-410-470-11	INDUCTOR 10μH		R3239	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W
<TRANSISTOR>							
Q3201	8-729-422-27	TRANSISTOR 2SD601A-Q		R3240	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3202	8-729-422-27	TRANSISTOR 2SD601A-Q		R3241	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3203	8-729-422-27	TRANSISTOR 2SD601A-Q		R3242	1-216-047-91	METAL GLAZE 820	5% 1/10W
Q3204	8-729-422-27	TRANSISTOR 2SD601A-Q		R3243	1-216-642-11	METAL CHIP 430	0.50% 1/10W
Q3205	8-729-422-27	TRANSISTOR 2SD601A-Q		R3244	1-216-638-11	METAL CHIP 300	0.50% 1/10W
Q3206	8-729-422-27	TRANSISTOR 2SD601A-Q		R3245	1-216-646-11	METAL CHIP 620	0.50% 1/10W
Q3207	8-729-422-27	TRANSISTOR 2SD601A-Q		R3246	1-216-053-00	METAL GLAZE 1.5K	5% 1/10W
Q3208	8-729-422-27	TRANSISTOR 2SD601A-Q		R3247	1-216-047-91	METAL GLAZE 820	5% 1/10W
Q3209	8-729-422-27	TRANSISTOR 2SD601A-Q		R3248	1-208-801-11	METAL CHIP 6.2K	0.50% 1/10W
Q3210	8-729-216-22	TRANSISTOR 2SA1162-G		R3249	1-216-295-91	CONDUCTOR, CHIP	
Q3211	8-729-216-22	TRANSISTOR 2SA1162-G		R3251	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3212	8-729-216-22	TRANSISTOR 2SA1162-G		R3252	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3213	8-729-216-22	TRANSISTOR 2SA1162-G		R3253	1-216-073-00	METAL GLAZE 10K	5% 1/10W
Q3214	8-729-216-22	TRANSISTOR 2SA1162-G		R3254	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3215	8-729-422-27	TRANSISTOR 2SD601A-Q		R3258	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3260	8-729-422-27	TRANSISTOR 2SD601A-Q		R3260	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
Q3261	8-729-422-27	TRANSISTOR 2SD601A-Q		R3261	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
Q3262	8-729-422-27	TRANSISTOR 2SD601A-Q		R3262	1-216-075-00	METAL GLAZE 12K	5% 1/10W
Q3263	8-729-422-27	TRANSISTOR 2SD601A-Q		R3263	1-216-041-00	METAL GLAZE 470	5% 1/10W
Q3264	8-729-422-27	TRANSISTOR 2SD601A-Q		R3264	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
Q3265	8-729-422-27	TRANSISTOR 2SD601A-Q		R3265	1-216-025-91	METAL GLAZE 100	5% 1/10W
Q3266	8-729-422-27	TRANSISTOR 2SD601A-Q		R3266	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3267	8-729-422-27	TRANSISTOR 2SD601A-Q		R3267	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q3268	8-729-422-27	TRANSISTOR 2SD601A-Q		R3268	1-216-041-00	METAL GLAZE 470	5% 1/10W
Q3269	8-729-422-27	TRANSISTOR 2SD601A-Q		R3269	1-216-043-91	METAL GLAZE 560	5% 1/10W
Q3270	8-729-422-27	TRANSISTOR 2SD601A-Q		R3270	1-216-041-00	METAL GLAZE 470	5% 1/10W

PA**A****M**

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R3271	1-216-043-91	METAL GLAZE 560	5%	1/10W	CN152	1-750-394-11	PIN, CONNECTOR (STAKING) 32P
R3272	1-216-097-91	METAL GLAZE 100K	5%	1/10W	CN164	1-564-505-11	PLUG, CONNECTOR 2P
R3273	1-216-105-91	METAL GLAZE 220K	5%	1/10W	CN165	1-564-505-11	PLUG, CONNECTOR 2P
R3274	1-216-045-00	METAL GLAZE 680	5%	1/10W	CN208	1-564-510-11	PLUG, CONNECTOR 7P
R3275	1-216-027-00	METAL GLAZE 120	5%	1/10W			
R3276	1-216-037-00	METAL GLAZE 330	5%	1/10W			<DIODE>
R3277	1-216-113-00	METAL GLAZE 470K	5%	1/10W	D170	8-719-110-76	DIODE RD33ESB1
R3278	1-216-025-91	METAL GLAZE 100	5%	1/10W	D175	8-719-110-76	DIODE RD33ESB1
R3279	1-216-057-00	METAL GLAZE 2.2K	5%	1/10W			
R3280	1-216-083-00	METAL GLAZE 27K	5%	1/10W			
R3281	1-216-055-00	METAL GLAZE 1.8K	5%	1/10W			<IC>
R3282	1-216-055-00	METAL GLAZE 1.8K	5%	1/10W	IC172	8-759-932-67	IC BU4053BCF
R3283	1-216-051-00	METAL GLAZE 1.2K	5%	1/10W			
R3286	1-216-295-91	CONDUCTOR, CHIP					
R3287	1-216-049-91	METAL GLAZE 1K	5%	1/10W			<COIL>
R3288	1-216-059-00	METAL GLAZE 2.7K	5%	1/10W	L170	1-408-408-00	INDUCTOR 8.2μH
R3289	1-216-049-91	METAL GLAZE 1K	5%	1/10W	L171	1-408-408-00	INDUCTOR 8.2μH
R3290	1-216-049-91	METAL GLAZE 1K	5%	1/10W	L172	1-408-408-00	INDUCTOR 8.2μH
R3291	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W			
R3292	1-216-049-91	METAL GLAZE 1K	5%	1/10W			
R3293	1-216-049-91	METAL GLAZE 1K	5%	1/10W			<TRANSISTOR>
R3295	1-216-045-00	METAL GLAZE 680	5%	1/10W	Q172	8-729-216-22	TRANSISTOR 2SA1162-G
R3296	1-216-037-00	METAL GLAZE 330	5%	1/10W	Q173	8-729-216-22	TRANSISTOR 2SA1162-G
R3297	1-216-638-11	METAL CHIP 300	0.50%	1/10W			
R3298	1-216-047-91	METAL GLAZE 820	5%	1/10W			
R3299	1-216-646-11	METAL CHIP 620	0.50%	1/10W			<RESISTOR>
R3300	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	R173	1-216-295-91	CONDUCTOR, CHIP
R3301	1-216-047-91	METAL GLAZE 820	5%	1/10W	R174	1-216-689-11	METAL GLAZE 39K
R3302	1-216-642-11	METAL CHIP 430	0.50%	1/10W	R175	1-215-900-11	METAL OXIDE 22K
R3303	1-208-801-11	METAL CHIP 6.2K	0.50%	1/10W	R177	1-215-900-11	METAL OXIDE 22K
R3305	1-216-295-91	CONDUCTOR, CHIP			R179	1-216-065-00	METAL GLAZE 4.7K
R3306	1-216-037-00	METAL GLAZE 330	5%	1/10W	R181	1-216-025-91	METAL GLAZE 100
				R185	1-216-025-91	METAL GLAZE 100	
				R186	1-216-065-00	METAL GLAZE 4.7K	
				R187	1-216-083-00	METAL GLAZE 27K	
				R188	1-216-689-11	METAL GLAZE 39K	
				R189	1-216-083-00	METAL GLAZE 27K	
				R190	1-216-065-00	METAL GLAZE 4.7K	
				R191	1-216-065-00	METAL GLAZE 4.7K	
				R198	1-249-425-11	CARBON 4.7K	
X3201	1-567-505-11	OSCILLATOR, CRYSTAL					<CRYSTAL>
X3202	1-760-095-21	VIBRATOR, CRYSTAL					
X3203	1-567-505-11	OSCILLATOR, CRYSTAL					
X3204	1-760-095-21	VIBRATOR, CRYSTAL					

<VARIABLE RESISTOR>							
RV3201	1-238-019-11	RES, ADJ, CARBON 47K					
<CRYSTAL>							

X3201 1-567-505-11 OSCILLATOR, CRYSTAL							
X3202 1-760-095-21 VIBRATOR, CRYSTAL							
X3203 1-567-505-11 OSCILLATOR, CRYSTAL							
X3204 1-760-095-21 VIBRATOR, CRYSTAL							
<TUNER>							
TU101 ▲ 8-598-254-00 TUNER, BTF-WA402							
TU102 ▲ 8-598-047-11 TUNER, ET BTF-LA401							

* A-1297-519-A A BOARD, COMPLETE							

<CAPACITOR>							
C173	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V			
C174	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V			
C175	1-126-935-11	ELECT 470μF	20%	16V			
C176	1-126-935-11	ELECT 470μF	20%	16V			
C177	1-126-964-11	ELECT 10μF	20%	50V			
C178	1-126-933-11	ELECT 100μF	20%	16V			
C179	1-128-551-11	ELECT 22μF	20%	25V			
C180	1-128-551-11	ELECT 22μF	20%	25V			
C181	1-164-161-11	CERAMIC CHIP 0.0022μF	10%	50V			
C182	1-164-161-11	CERAMIC CHIP 0.0022μF	10%	50V			
C184	1-126-964-11	ELECT 10μF	20%	50V			
C185	1-126-964-11	ELECT 10μF	20%	50V			
<CONNECTOR>							
CN151	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P			C011	1-163-001-11	CERAMIC CHIP 220PF
					C012	1-163-001-11	CERAMIC CHIP 220PF
<CAPACITOR>							
C001	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			
C002	1-163-809-11	CERAMIC CHIP 0.047μF	10%	25V			
C003	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			
C004	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			
C005	1-163-125-00	CERAMIC CHIP 220PF	5%	50V			
C006	1-163-125-00	CERAMIC CHIP 220PF	5%	50V			
C007	1-124-903-11	ELECT 1μF	20%	50V			
C008	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			
C009	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			
C010	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			
<CONNECTOR>							
C011	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			
C012	1-163-001-11	CERAMIC CHIP 220PF	10%	50V			



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK			
C013	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C313	ELECT	47μF	20%	16V	
C014	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C314	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C015	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C315	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C016	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C317	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C017	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C319	1-124-903-11	ELECT	1μF	20%	50V
C018	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C320	1-124-903-11	ELECT	1μF	20%	50V
C019	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C321	1-163-017-00	CERAMIC CHIP 0.0047μF	10%	50V	
C020	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C322	1-126-935-11	ELECT	470μF	20%	16V
C021	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C323	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C022	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C324	1-126-966-11	ELECT	33μF	20%	16V
C023	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C325	1-124-925-11	ELECT	2.2μF	20%	50V
C025	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C326	1-128-551-11	ELECT	22μF	20%	50V
C026	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C327	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C028	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C328	1-124-902-00	ELECT	0.47μF	20%	50V
C029	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C329	1-124-902-00	ELECT	0.47μF	20%	50V
C030	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C330	1-124-902-00	ELECT	0.47μF	20%	50V
C032	1-124-902-00	ELECT 0.47μF	20%	50V	C331	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C033	1-126-933-11	ELECT 100μF	20%	10V	C332	1-126-933-11	ELECT	100μF	20%	16V
C034	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C333	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C035	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C334	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	
C036	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C335	1-124-902-00	ELECT	0.47μF	20%	50V
C041	1-163-009-11	CERAMIC CHIP 0.001μF	10%	50V	C336	1-124-927-11	ELECT	4.7μF	20%	50V
C042	1-126-964-11	ELECT 10μF	20%	50V	C337	1-124-464-11	ELECT	0.22μF	20%	50V
C043	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	C338	1-136-153-00	FILM 0.01μF	5%	50V	
C045	1-126-940-11	ELECT 330μF	20%	16V	C340	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C047	1-104-896-11	CERAMIC CHIP 24PF	2%	50V	C341	1-163-009-11	CERAMIC CHIP 0.001μF	10%	50V	
C048	1-126-964-11	ELECT 10μF	20%	50V	C342	1-136-153-00	FILM 0.01μF	5%	50V	
C049	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C343	1-104-775-51	ELECT 10μF	20%	16V	
C050	1-163-001-11	CERAMIC CHIP 220PF	10%	50V	C346	1-126-935-11	ELECT 470μF	20%	16V	
C051	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C347	1-124-584-00	ELECT 100μF	20%	10V		
C053	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	C350	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C054	1-163-111-00	CERAMIC CHIP 56PF	5%	50V	C351	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C055	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C352	1-164-232-11	CERAMIC CHIP 0.01μF	10%	50V	
C058	1-164-161-11	CERAMIC CHIP 0.0022μF	10%	50V	C361	1-163-038-91	CERAMIC CHIP 0.1μF	25V		
C059	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C390	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C060	1-163-109-00	CERAMIC CHIP 47PF	5%	50V						
C061	1-163-109-00	CERAMIC CHIP 47PF	5%	50V						
C062	1-163-117-00	CERAMIC CHIP 100PF	5%	50V						
C065	1-124-903-11	ELECT 1μF	20%	50V	CN129	1-564-523-11	PLUG, CONNECTOR 8P			
C073	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	CN130	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P			
C074	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	CN131	* 1-691-914-11	CONNECTOR, BOARD TO BOARD 15P			
C101	1-126-935-11	ELECT 470μF	20%	16V	CN134	1-564-524-11	PLUG, CONNECTOR 9P			
C150	1-136-165-00	FILM 0.1μF	5%	50V	CN135	* 1-564-515-11	PLUG, CONNECTOR 12P			
C151	1-136-495-11	FILM 0.068μF	5%	50V	CN137	1-750-394-11	PIN, CONNECTOR (STAKING) 32P			
C152	1-126-964-11	ELECT 10μF	20%	50V	CN138	* 1-564-512-11	PLUG, CONNECTOR 9P			
C153	1-137-367-11	FILM 0.0033μF	5%	50V	CN140	* 1-564-509-11	PLUG, CONNECTOR 6P			
C154	1-163-038-91	CERAMIC CHIP 0.1μF	25V		CN163	* 1-564-508-11	PLUG, CONNECTOR 5P			
C155	1-126-964-11	ELECT 10μF	20%	50V	CN168	1-564-505-11	PLUG, CONNECTOR 2P			
C156	1-163-135-00	CERAMIC CHIP 560PF	5%	50V						
C157	1-163-038-91	CERAMIC CHIP 0.1μF	25V							
C158	1-124-903-11	ELECT 1μF	20%	50V	D003	8-719-404-46	DIODE MA110			
C160	1-124-903-11	ELECT 1μF	20%	50V	D004	8-719-404-46	DIODE MA110			
C201	1-535-303-00	LEAD, JUMPER (5.0mm)			D005	8-719-404-46	DIODE MA110			
C202	1-535-303-00	LEAD, JUMPER (5.0mm)			D006	8-719-110-17	DIODE RD10ESB2			
C206	1-124-902-00	ELECT 0.47μF	20%	50V	D007	8-713-101-85	DIODE 1T363-01-T8A			
C207	1-124-902-00	ELECT 0.47μF	20%	50V	D008	8-719-404-46	DIODE MA110			
C209	1-104-664-11	ELECT 47μF	20%	25V	D020	8-719-110-17	DIODE RD10ESB2			
C215	1-104-664-11	ELECT 47μF	20%	25V	D021	8-719-110-17	DIODE RD10ESB2			
C216	1-104-665-11	ELECT 100μF	20%	25V	D203	8-719-109-66	DIODE RD3.3ESB2			
C300	1-126-964-11	ELECT 10μF	20%	50V	D207	8-719-510-48	DIODE D1N20R			
C301	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	D303	8-719-404-46	DIODE MA110			
C302	1-124-902-00	ELECT 0.47μF	20%	50V	D308	8-719-109-84	DIODE RD5.1ESB1			
C304	1-124-927-11	ELECT 4.7μF	20%	50V	D309	8-719-110-17	DIODE RD10ESB2			
C308	1-126-952-11	ELECT 1000μF	20%	16V	D310	8-719-110-17	DIODE RD10ESB2			
C309	1-163-017-00	CERAMIC CHIP 0.0047μF	10%	50V	D311	8-719-110-17	DIODE RD10ESB2			
C310	1-163-017-00	CERAMIC CHIP 0.0047μF	10%	50V	D312	8-719-404-46	DIODE MA110			
C311	1-124-925-11	ELECT 2.2μF	20%	50V	D313	8-719-121-24	DIODE RD9.1ESL			
C312	1-163-017-00	CERAMIC CHIP 0.0047μF	10%	50V	D314	8-719-404-46	DIODE MA110			

M

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D315	8-719-404-46	DIODE MA110		R026	1-216-097-91	METAL GLAZE 100K	5% 1/10W
D316	8-719-404-46	DIODE MA110		R027	1-216-121-91	METAL GLAZE 1M	5% 1/10W
D327	8-719-404-46	DIODE MA110		R028	1-216-073-00	METAL GLAZE 10K	5% 1/10W
D328	8-719-404-46	DIODE MA110		R029	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
D330	8-719-110-22	DIODE RD11ESB2		R030	1-216-073-00	METAL GLAZE 10K	5% 1/10W
D341	8-719-121-24	DIODE RD9.1ESL		R031	1-216-033-00	METAL GLAZE 220	5% 1/10W
D355	8-719-404-46	DIODE MA110		R032	1-216-033-00	METAL GLAZE 220	5% 1/10W
				R033	1-216-033-00	METAL GLAZE 220	5% 1/10W
				R034	1-216-033-00	METAL GLAZE 220	5% 1/10W
				R035	1-216-033-00	METAL GLAZE 220	5% 1/10W
				R038	1-216-033-00	METAL GLAZE 220	5% 1/10W
IC101	8-752-867-91	IC CXP85332A-046S		R039	1-216-295-91	CONDUCTOR, CHIP	
IC102	8-759-067-24	IC 24C04AI/P		R040	1-216-049-91	METAL GLAZE 1K	5% 1/10W
IC103	8-759-805-37	IC L78LR05D-MA		R041	1-216-033-00	METAL GLAZE 220	5% 1/10W
IC150	8-759-328-12	IC Z8622812PSC		R042	1-216-033-00	METAL GLAZE 220	5% 1/10W
IC203	8-749-921-21	IC SI-3120C		R043	1-216-295-91	CONDUCTOR, CHIP	
IC301	8-752-063-50	IC CXA1477AS		R044	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
IC333	8-759-981-61	IC LM2901M		R045	1-216-033-00	METAL GLAZE 220	5% 1/10W
				R048	1-216-073-00	METAL GLAZE 10K	5% 1/10W
				R049	1-216-049-91	METAL GLAZE 1K	5% 1/10W
L001	1-410-470-11	INDUCTOR 10μH		R050	1-216-049-91	METAL GLAZE 1K	5% 1/10W
L002	1-410-476-11	INDUCTOR 33μH		R051	1-216-073-00	METAL GLAZE 10K	5% 1/10W
L320	1-408-413-00	INDUCTOR 22μH		R052	1-216-073-00	METAL GLAZE 10K	5% 1/10W
				R053	1-216-049-91	METAL GLAZE 1K	5% 1/10W
				R054	1-216-049-91	METAL GLAZE 1K	5% 1/10W
				R055	1-216-033-00	METAL GLAZE 220	5% 1/10W
				R057	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
				R059	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
Q002	8-729-216-22	TRANSISTOR 2SA1162-G		R060	1-216-041-00	METAL GLAZE 470	5% 1/10W
Q004	8-729-216-22	TRANSISTOR 2SA1162-G		R061	1-216-041-00	METAL GLAZE 470	5% 1/10W
Q151	8-729-422-27	TRANSISTOR 2SD601A-Q		R062	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
Q201	8-729-422-27	TRANSISTOR 2SD601A-Q		R064	1-216-077-00	METAL GLAZE 15K	5% 1/10W
Q203	8-729-422-27	TRANSISTOR 2SD601A-Q		R065	1-216-083-00	METAL GLAZE 27K	5% 1/10W
Q204	8-729-422-27	TRANSISTOR 2SD601A-Q		R066	1-216-025-91	METAL GLAZE 100	5% 1/10W
Q302	8-729-422-27	TRANSISTOR 2SD601A-Q		R067	1-216-025-91	METAL GLAZE 100	5% 1/10W
Q303	8-729-422-27	TRANSISTOR 2SD601A-Q		R069	1-216-033-00	METAL GLAZE 220	5% 1/10W
Q304	8-729-422-27	TRANSISTOR 2SD601A-Q		R070	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
Q307	8-729-422-27	TRANSISTOR 2SD601A-Q		R075	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
Q308	8-729-422-27	TRANSISTOR 2SD601A-Q		R076	1-216-295-91	CONDUCTOR, CHIP	
Q315	8-729-216-22	TRANSISTOR 2SA1162-G		R077	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
Q316	8-729-216-22	TRANSISTOR 2SA1162-G		R078	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
Q317	8-729-216-22	TRANSISTOR 2SA1162-G		R079	1-216-295-91	CONDUCTOR, CHIP	
Q318	8-729-216-22	TRANSISTOR 2SA1162-G		R080	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
Q340	8-729-216-22	TRANSISTOR 2SA1162-G		R082	1-216-073-00	METAL GLAZE 10K	5% 1/10W
Q391	8-729-216-22	TRANSISTOR 2SA1162-G		R083	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
Q392	8-729-216-22	TRANSISTOR 2SA1162-G		R086	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
				R087	1-216-049-91	METAL GLAZE 1K	5% 1/10W
				R095	1-216-079-00	METAL GLAZE 18K	5% 1/10W
R001	1-216-033-00	METAL GLAZE 220	5% 1/10W	R099	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R002	1-216-033-00	METAL GLAZE 220	5% 1/10W	R100	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R003	1-216-033-00	METAL GLAZE 220	5% 1/10W	R101	1-216-045-00	METAL GLAZE 680	5% 1/10W
R004	1-216-033-00	METAL GLAZE 220	5% 1/10W	R102	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R005	1-216-033-00	METAL GLAZE 220	5% 1/10W	R103	1-216-045-00	METAL GLAZE 680	5% 1/10W
R006	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R104	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
R007	1-216-033-00	METAL GLAZE 220	5% 1/10W	R105	1-216-045-00	METAL GLAZE 680	5% 1/10W
R008	1-216-033-00	METAL GLAZE 220	5% 1/10W	R150	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R009	1-216-033-00	METAL GLAZE 220	5% 1/10W	R151	1-216-295-91	CONDUCTOR, CHIP	
R010	1-216-033-00	METAL GLAZE 220	5% 1/10W	R152	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R011	1-216-033-00	METAL GLAZE 220	5% 1/10W	R153	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R012	1-216-033-00	METAL GLAZE 220	5% 1/10W	R154	1-216-295-91	CONDUCTOR, CHIP	
R013	1-216-295-91	CONDUCTOR, CHIP		R155	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R014	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R156	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R015	1-216-033-00	METAL GLAZE 220	5% 1/10W	R157	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R016	1-216-033-00	METAL GLAZE 220	5% 1/10W	R158	1-216-041-00	METAL GLAZE 470	5% 1/10W
R019	1-216-033-00	METAL GLAZE 220	5% 1/10W	R159	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R021	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R160	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R022	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R165	1-216-295-91	CONDUCTOR, CHIP	
R023	1-216-033-00	METAL GLAZE 220	5% 1/10W	R166	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R025	1-216-033-00	METAL GLAZE 220	5% 1/10W				

C

DF

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
<CONNECTOR>											
CN1201	* 1-573-296-21	CONNECTOR, BOARD TO BOARD 10P		R1233	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W				
<FILTER>											
FL1201	1-239-847-11	FILTER, LOW PASS		R1234	1-216-043-91	METAL GLAZE 560	5% 1/10W				
FL1202	1-239-847-11	FILTER, LOW PASS		R1236	1-216-075-00	METAL GLAZE 12K	5% 1/10W				
FL1203	1-239-847-11	FILTER, LOW PASS		R1237	1-216-081-00	METAL GLAZE 22K	5% 1/10W				
<IC>											
IC1201	8-759-346-46	IC MC141624		R1238	1-216-081-00	METAL GLAZE 22K	5% 1/10W				
IC1202	8-759-065-82	IC MM1093ND		R1239	1-216-639-11	METAL CHIP 330	0.50% 1/10W				
IC1203	8-759-701-56	IC NJM78M05FA		R1240	1-216-650-11	METAL CHIP 910	0.50% 1/10W				
<COIL>											
L1201	1-408-617-31	INDUCTOR 150 μ H		R1241	1-216-649-11	METAL CHIP 820	0.50% 1/10W				
L1202	1-408-413-00	INDUCTOR 22 μ H		R1242	1-216-001-00	METAL GLAZE 10	5% 1/10W				
L1203	1-408-413-00	INDUCTOR 22 μ H		R1243	1-216-049-91	METAL GLAZE 1K	5% 1/10W				
L1204	1-408-413-00	INDUCTOR 22 μ H		R1246	1-216-037-00	METAL GLAZE 330	5% 1/10W				
L1205	1-408-413-00	INDUCTOR 22 μ H		<CRYSTAL>							
L1206	1-408-413-00	INDUCTOR 22 μ H		X1201	1-567-505-11	OSCILLATOR, CRYSTAL					
<TRANSISTOR>											
Q1201	8-729-216-22	TRANSISTOR 2SA1162-G		*****							
Q1202	8-729-422-27	TRANSISTOR 2SD601A-Q		* A-1346-334-A D BOARD, COMPLETE							
Q1203	8-729-216-22	TRANSISTOR 2SA1162-G		*****							
Q1204	8-729-422-27	TRANSISTOR 2SD601A-Q		(KV-27XBR45/27XBR45M)							
Q1205	8-729-216-22	TRANSISTOR 2SA1162-G		* A-1346-331-A D BOARD, COMPLETE							
Q1206	8-729-422-27	TRANSISTOR 2SD601A-Q		*****							
Q1207	8-729-216-22	TRANSISTOR 2SA1162-G		(KV-32XBR45/32XBR85)							
Q1208	8-729-422-27	TRANSISTOR 2SD601A-Q		<CAPACITOR>							
Q1209	8-729-216-22	TRANSISTOR 2SA1162-G		C501	1-126-942-61	ELECT	1000 μ F 20%	25V			
Q1210	8-729-422-27	TRANSISTOR 2SD601A-Q		C502	1-162-131-11	CERAMIC	220PF 10%	2KV			
<RESISTOR>				C503	1-126-942-61	ELECT	1000 μ F 20%	25V			
R1201	1-216-645-11	METAL CHIP 560	0.50%	C504	1-137-366-11	FILM	0.0022 μ F 5%	50V			
R1202	1-208-774-11	METAL CHIP 470	0.50%	C505	1-128-551-11	ELECT	22 μ F 20%	25V			
R1203	1-216-043-91	METAL GLAZE 560	5%	C506	1-128-560-11	ELECT	22 μ F 20%	100V			
R1204	1-216-295-91	CONDUCTOR, CHIP		C507	1-107-636-11	ELECT	10 μ F 20%	160V			
R1205	1-216-025-91	METAL GLAZE 100	5%	C508	1-129-898-00	FILM	0.0022 μ F 5%	630V			
R1206	1-216-067-00	METAL GLAZE 5.6K	5%	C509	1-128-551-11	ELECT	22 μ F 20%	25V			
R1207	1-216-049-91	METAL GLAZE 1K	5%	C510	1-106-387-00	MYLAR	0.068 μ F 10%	200V			
R1208	1-216-057-00	METAL GLAZE 2.2K	5%	C511	1-123-024-21	ELECT	33 μ F	160V			
R1209	1-216-077-00	METAL GLAZE 15K	5%	C512	1-102-212-00	CERAMIC	820PF 10%	500V			
R1210	1-216-065-00	METAL GLAZE 4.7K	5%	C513	1-102-212-00	CERAMIC	820PF 10%	500V			
R1211	1-216-065-00	METAL GLAZE 4.7K	5%	C514	1-102-244-00	CERAMIC	220PF 10%	500V			
R1212	1-216-039-00	METAL GLAZE 390	5%	C515	1-137-416-11	FILM	0.01 μ F 10%	100V			
R1213	1-216-121-91	METAL GLAZE 1M	5%	C517	1-162-116-00	CERAMIC	680PF 10%	2KV			
R1214	1-216-077-00	METAL GLAZE 15K	5%	C518	1-162-116-00	CERAMIC	680PF 10%	2KV			
R1215	1-216-037-00	METAL GLAZE 330	5%	C519	\triangle 1-104-771-11	FILM	0.02 μ F 3%	2KV			
R1216	1-216-067-00	METAL GLAZE 5.6K	5%	C520	\triangle 1-162-134-11	CERAMIC	470PF 10%	2KV			
R1217	1-216-025-91	METAL GLAZE 100	5%	C521	\triangle 1-129-723-00	FILM	0.056 μ F 5%	630V			
R1218	1-216-025-91	METAL GLAZE 100	5%	C522	1-106-383-00	MYLAR	0.047 μ F 10%	200V			
R1219	1-216-113-00	METAL GLAZE 470K	5%	C523	1-102-002-00	CERAMIC	680PF 10%	500V			
R1221	1-216-073-00	METAL GLAZE 10K	5%	C524	1-102-212-00	CERAMIC	820PF 10%	500V			
R1222	1-216-057-00	METAL GLAZE 2.2K	5%	C525	1-124-902-00	ELECT	0.47 μ F 20%	50V			
R1223	1-216-043-91	METAL GLAZE 560	5%	C526	1-106-395-00	MYLAR	0.15 μ F 10%	200V			
R1225	1-216-075-00	METAL GLAZE 12K	5%	C527	1-109-956-11	ELECT	1 μ F 20%	200V			
R1226	1-216-081-00	METAL GLAZE 22K	5%	C528	1-136-113-00	FILM	2 μ F 5%	200V			
R1227	1-216-081-00	METAL GLAZE 22K	5%	C529	1-137-410-11	FILM	0.001 μ F 10%	100V			
R1228	1-216-031-00	METAL GLAZE 180	5%	C530	1-104-770-11	FILM	0.62 μ F 5%	200V			
R1229	1-216-048-00	METAL GLAZE 910	5%	C531	1-104-664-11	ELECT	47 μ F 20%	25V			
R1230	1-216-041-00	METAL GLAZE 470	5%	C532	1-136-165-00	FILM	0.1 μ F 5%	50V			
R1231	1-216-025-91	METAL GLAZE 100	5%	C533	1-124-927-11	ELECT	4.7 μ F 20%	50V			
R1232	1-216-049-91	METAL GLAZE 1K	5%	C534	1-136-161-00	FILM	0.047 μ F 5%	50V			
				C535	1-126-969-11	ELECT	220 μ F 20%	50V			
				C536	1-137-398-11	FILM	0.068 μ F 10%	100V			
				C537	1-126-964-11	ELECT	10 μ F 20%	50V			
				C538	1-136-161-00	FILM	0.047 μ F 5%	50V			

D

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Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C540	1-137-366-11	FILM	0.0022μF 5%	50V			(KV-32XBR45/32XBR85)
C541	1-137-366-11	FILM	0.0022μF 5%	50V			
C542	1-137-366-11	FILM	0.0022μF 5%	50V			
C545	1-124-927-11	ELECT	4.7μF 20%	50V			
C547	1-102-112-00	CERAMIC	330PF 10%	50V			
C548	A. 1-162-116-00	CERAMIC	680PF 10%	2KV			
C553	1-102-112-00	CERAMIC	330PF 10%	50V			
C561	1-162-815-11	CERAMIC	47PF 5%	500V			
C595	1-107-635-11	ELECT	4.7μF 20%	160V			
C598	1-107-650-11	ELECT	3.3μF 20%	160V			
C600	1-126-964-11	ELECT	10μF 20%	50V			
C601	A. 1-136-311-11	FILM	0.47μF 20%	125V			
C602	A. 1-136-311-11	FILM	0.47μF 20%	125V			
C603	A. 1-104-708-11	FILM	0.47μF 20%	250V			
C604	A. 1-162-578-81	CERAMIC	0.047μF 20%	400V			
C607	1-125-735-11	ELECT	470μF 20%	200V			
C608	1-125-735-11	ELECT	470μF 20%	200V			
C609	1-136-169-00	FILM	0.22μF 5%	50V			
C610	1-136-169-00	FILM	0.22μF 5%	50V			
C611	1-136-169-00	FILM	0.22μF 5%	50V			
C612	1-136-169-00	FILM	0.22μF 5%	50V			
C613	1-164-625-11	CERAMIC	680PF 10%	500V			
C614	1-164-625-11	CERAMIC	680PF 10%	500V			
C616	1-126-964-11	ELECT	10μF 20%	50V			
C617	1-128-550-11	ELECT	2200μF 20%	50V			
C618	1-126-943-11	ELECT	2200μF 20%	25V			
C619	1-126-952-11	ELECT	1000μF 20%	16V			
C620	1-164-644-11	CERAMIC	330PF 10%	500V			
C621	1-126-356-11	ELECT	220μF 20%	160V			
C623	1-162-117-00	CERAMIC	100PF 10%	500V			
C624	1-136-155-00	FILM	0.015μF 5%	50V			
C625	1-129-719-00	FILM	0.027μF 10%	400V			
C626	1-104-665-11	ELECT	100μF 20%	25V			
C634	1-165-127-11	CERAMIC	470PF 10%	500V			
C635	1-126-967-11	ELECT	47μF 20%	16V			
C636	1-137-374-11	FILM	0.047μF 5%	50V			
C637	1-128-551-11	ELECT	22μF 20%	25V			
C639	1-161-740-00	CERAMIC	470PF 10%	400V			
C641	1-126-933-11	ELECT	100μF 20%	10V			
C642	1-137-217-11	FILM	0.01μF 5%	0			
C643	1-137-218-11	FILM	0.012μF 5%	0			
C645	1-102-125-00	CERAMIC	0.0047μF 10%	50V			
C646	1-126-933-11	ELECT	100μF 20%	16V			
C647	1-128-551-11	ELECT	22μF 20%	25V			
C684	1-124-667-11	ELECT	10μF 20%	50V			
C685	1-136-346-21	FILM	0.22μF 20%	125V			
C695	1-126-964-11	ELECT	10μF 20%	50V			(KV-27XBR45/27XBR45M)
C2205	1-124-925-11	ELECT	2.2μF 20%	50V			
C2208	1-124-925-11	ELECT	2.2μF 20%	50V			
C2210	1-104-666-11	ELECT	220μF 20%	25V			
C2211	1-104-664-11	ELECT	47μF 20%	25V			
C2212	1-104-666-11	ELECT	220μF 20%	25V			
C2213	1-136-173-00	FILM	0.47μF 5%	50V			
C2215	1-136-169-00	FILM	0.22μF 5%	50V			
C2216	1-128-550-11	ELECT	2200μF 20%	50V			
C2217	1-136-169-00	FILM	0.22μF 5%	50V			
C2218	1-126-952-11	ELECT	1000μF 20%	35V			
C2219	1-126-952-11	ELECT	1000μF 20%	35V			
C2220	1-124-925-11	ELECT	2.2μF 20%	50V			
<CONNECTOR>							
CN104	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P					
CN105	* 1-508-768-00	PIN, CONNECTOR (5mm PITCH) 6P					
CN107	* 1-580-798-11	CONNECTOR PIN (DY) 6P					
CN108	* 1-573-296-21	CONNECTOR, BOARD TO BOARD 10P					(KV-32XBR45/32XBR85)
CN109	* 1-573-296-21	CONNECTOR, BOARD TO BOARD 10P					
(KV-32XBR45/32XBR85)							
CN113	* 1-508-765-00	PIN, CONNECTOR (5mm PITCH) 3P					
CN114	* 1-580-843-11	PIN, CONNECTOR (POWER)					
CN115	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P					
CN116	* 1-691-915-11	CONNECTOR, BOARD TO BOARD 15P					
CN117	1-573-978-21	CONNECTOR, BOARD TO BOARD 11P					
CN125	* 1-564-506-11	PLUG, CONNECTOR 3P					
CN126	* 1-564-506-11	PLUG, CONNECTOR 3P					
<DIODE>							
D501	8-719-028-72	DIODE RGP02-17EL-6433					
D502	8-719-979-85	DIODE EGP20G					
D503	8-719-979-85	DIODE EGP20G					
D504	8-719-302-43	DIODE EL1Z					
D505	8-719-302-43	DIODE EL1Z					
D506	8-719-945-80	DIODE ERC06-15S					
D507	8-719-945-80	DIODE ERC06-15S					
D508	8-719-900-26	DIODE ERD29-08J					
D509	8-719-302-43	DIODE EL1Z					
D510	8-719-908-03	DIODE GP08D					
D511	8-719-908-03	DIODE GP08D					
D512	8-719-109-84	DIODE RD5.1ESB1					
D513	8-719-908-03	DIODE GP08D					
D514	8-719-991-33	DIODE ISS133T-77					
D515	8-719-991-33	DIODE ISS133T-77					
D601	8-719-991-33	DIODE 1SS133T-77					
D602	8-719-510-53	DIODE D4SB60L					
D603	8-719-500-69	DIODE S3V10SS					
D605	8-719-500-69	DIODE S3V10SS					
D607	8-719-510-02	DIODE D1NS4					
D608	8-719-022-97	DIODE D2S4MF					
D609	8-719-022-97	DIODE D2S4MF					
D610	8-719-022-97	DIODE D2S4MF					
D611	8-719-022-97	DIODE D2S4MF					
D612	8-719-510-12	DIODE D10SC4M					
D613	8-719-022-97	DIODE D2S4MF					
D614	8-719-110-33	DIODE RD12ESB3					
D615	8-719-027-43	DIODE S2L20UF					
D616	8-719-027-43	DIODE S2L20UF					
D617	8-719-027-43	DIODE S2L20UF					
D618	8-719-027-43	DIODE S2L20UF					
D619	8-719-510-02	DIODE D1NS4					
D622	8-719-991-33	DIODE ISS133T-77					
D623	8-719-991-33	DIODE ISS133T-77					
D624	8-719-991-33	DIODE ISS133T-77					
D626	8-719-510-48	DIODE D1N20R					
D627	8-719-510-48	DIODE D1N20R					
D628	8-719-991-33	DIODE 1SS133T-77					
D629	8-719-908-03	DIODE GP08D					
D630	8-719-908-03	DIODE GP08D					
D631	8-719-908-03	DIODE GP08D					
D632	8-719-908-03	DIODE GP08D					
D633	8-719-110-09	DIODE RD8.2ESB3					
D634	8-719-991-33	DIODE 1SS133T-77					
D635	8-719-991-33	DIODE 1SS133T-77					
D636	8-719-510-48	DIODE D1N20R					
D637	8-719-991-33	DIODE 1SS133T-77					
D638	8-719-991-33	DIODE 1SS133T-77					
<FUSE>							
F601	A. 1-576-193-11	FUSE (6.3A/125V)					
	1-533-223-11	HOLDER, FUSE; F601					
<FERRITE BEAD>							
FB501	1-412-911-11	INDUCTOR, FERRITE BEAD					

The components identified by shading and mark **A** are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- The components identified by **A** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
FB502	1-412-911-11	INDUCTOR, FERRITE BEAD		R507	1-249-429-11	CARBON	10K 5% 1/4W
FB601	1-412-911-11	INDUCTOR, FERRITE BEAD		R508	1-249-425-11	CARBON	4.7K 5% 1/4W
FB602	1-412-911-11	INDUCTOR, FERRITE BEAD		R509	1-249-389-11	CARBON	4.7 5% 1/4W F
FB603	1-412-911-11	INDUCTOR, FERRITE BEAD		R511 A			
FB604	1-412-911-11	INDUCTOR, FERRITE BEAD		R512	1-249-389-11	CARBON	4.7 5% 1/4W F
FB605	1-412-911-11	INDUCTOR, FERRITE BEAD		R513	1-216-385-11	METAL OXIDE	0.47 5% 3W F
FB606	1-412-911-11	INDUCTOR, FERRITE BEAD		R514	1-249-429-11	CARBON	10K 5% 1/4W
FB610	1-535-303-00	LEAD, JUMPER (5.0mm)		R516	1-249-401-11	CARBON	47 5% 1/4W
FB613	1-412-911-11	INDUCTOR, FERRITE BEAD		R517	1-215-892-11	METAL OXIDE	1K 5% 2W F
FB614	1-412-911-11	INDUCTOR, FERRITE BEAD		R518	1-215-892-11	METAL OXIDE	1K 5% 2W F
<IC>				R519	1-249-426-11	CARBON	5.6K 5% 1/4W F
IC501	8-759-980-58	IC TDA8172		R520	1-249-423-11	CARBON	3.3K 5% 1/4W
IC504	8-759-103-93	IC μPC393C		R521	1-249-411-11	CARBON	330 5% 1/4W
IC601 A. 1-810-051-11 POWER MODULE DM-48				R522	1-215-886-11	METAL OXIDE	100 5% 2W F
IC604	8-759-231-53	IC TA7805S		R523	1-215-862-11	METAL OXIDE	68 5% 1W F
IC605	8-759-231-58	IC TA7812S		R524 A			
IC606	8-759-701-59	IC NJM78M09FA		R525	1-215-884-11	METAL OXIDE	47 5% 2W F (KV-27XBR45/27XBR45M)
IC610	8-759-708-05	IC NJM78L05A		R526	1-247-887-00	CARBON	220K 5% 1/4W
IC2200	8-759-089-13	IC TDA7262		R527	1-215-861-00	METAL OXIDE	47 5% 1W F
<COIL>				R528	1-247-750-11	CARBON	680 5% 1/2W F
L502	1-421-465-00	COIL, FERRITE CHOKE 68μH		R530	1-215-445-00	METAL	10K 1% 1/4W
L503	1-412-524-11	INDUCTOR 8.2μH		R531	1-247-903-00	CARBON	1M 5% 1/4W
L504	1-410-669-31	INDUCTOR 33μH		R532	1-215-446-00	METAL	11K 1% 1/4W
L505	1-459-104-00	COIL, WITH CORE		R534	1-249-385-11	CARBON	2.2 5% 1/4W F
L506	1-410-396-41	FERRITE BEAD INDUCTOR 0.45μH		R535	1-216-453-00	METAL OXIDE	270 5% 2W F
L508	1-412-553-11	INDUCTOR 3.3mH		R536	1-249-389-11	CARBON	4.7 5% 1/4W F (KV-32XBR45/32XBR45)
L509 A. 1-409-861-11 COIL, HORIZONTAL LINEARITY				R539	1-215-459-00	METAL	39K 1% 1/4W
L510	1-411-189-11	COIL, CHOKE 15mH		R543	1-249-419-11	CARBON	1.5K 5% 1/4W
L513	1-412-524-11	INDUCTOR 8.2μH		R546	1-247-863-91	CARBON	22K 5% 1/4W
<PROTECTOR MODULE>				R547	1-247-883-00	CARBON	150K 5% 1/4W
PM501	1-810-061-11	PROTECTOR MODULE PM-38 (KV-27XBR45/27XBR45M)		R548	1-247-863-91	CARBON	22K 5% 1/4W (KV-32XBR45/32XBR45)
PM501	1-810-061-21	PROTECTOR MODULE PM-39 (KV-32XBR45/32XBR45)		R554	1-216-371-00	METAL OXIDE	1.5 5% 2W F
<IC LINK>				R556	1-249-411-11	CARBON	330 5% 1/4W
PS601 A. 1-532-679-00	LINK, IC (0.6A/150V)			R557	1-249-415-11	CARBON	680 5% 1/4W F
PS2201 A. 1-532-984-11	LINK, IC (2A/90V)			R561	1-249-429-11	CARBON	10K 5% 1/4W
<TRANSISTOR>				R562	1-215-437-00	METAL	4.7K 1% 1/4W
Q502	8-729-119-80	TRANSISTOR 2SC2688-LK		R563	1-249-429-11	CARBON	10K 5% 1/4W
Q503	8-729-809-29	TRANSISTOR 2SC4159-E		R564	1-247-863-91	CARBON	22K 5% 1/4W
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE		R566	1-249-435-11	CARBON	33K 5% 1/4W
Q591	8-729-016-32	TRANSISTOR 2SC4927-01		R580	1-249-411-11	CARBON	330 5% 1/4W
Q601	8-729-019-49	TRANSISTOR 2SC4834M		R601 A			
Q602	8-729-019-49	TRANSISTOR 2SC4834M		R602	1-202-723-00	SOLID	2.2M 20% 1/2W
Q603	8-729-119-76	TRANSISTOR 2SA1175-HFE		R603	1-249-419-11	CARBON	1.5K 5% 1/4W
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE		R605	1-247-893-11	CARBON	390K 5% 1/4W
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE		R606	1-247-893-11	CARBON	390K 5% 1/4W
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE		R607	1-202-933-61	FUSIBLE	0.1 10% 1/2W F
Q613	8-729-024-95	TRANSISTOR 2SB1565EF		R608	1-215-860-11	METAL OXIDE	33 5% 1W F
Q614	8-729-119-78	TRANSISTOR 2SC2785-HFE		R609	1-216-349-00	METAL OXIDE	1 5% 1W F
Q2202	8-729-119-78	TRANSISTOR 2SC2785-HFE		R610	1-216-369-00	METAL OXIDE	1 5% 2W F
Q2203	8-729-119-76	TRANSISTOR 2SA1175-HFE		R611	1-216-492-11	METAL OXIDE	82K 5% 3W F
<RESISTOR>				R613	1-215-908-00	METAL OXIDE	33 5% 3W F
R501	1-249-444-11	CARBON 0.56 5% 1/4W F		R614	1-215-908-00	METAL OXIDE	33 5% 3W F
R503	1-215-862-11	METAL OXIDE 68 5% 1W F		R615	1-249-421-11	CARBON	2.2K 5% 1/4W
R504	1-215-872-11	METAL OXIDE 3.3K 5% 1W F		R616	1-249-417-11	CARBON	1K 5% 1/4W
R505	1-249-443-11	CARBON 0.47 5% 1/4W F		R617	1-249-377-11	CARBON	0.47 5% 1/4W F
R506	1-215-886-11	METAL OXIDE 100 5% 2W F		R618	1-249-377-11	CARBON	0.47 5% 1/4W F
				R619	1-249-377-11	CARBON	0.47 5% 1/4W F
				R621	1-249-377-11	CARBON	0.47 5% 1/4W F
				R622	1-249-377-11	CARBON	0.47 5% 1/4W F
				R623	1-249-377-11	CARBON	0.47 5% 1/4W F
				R624	1-249-377-11	CARBON	0.47 5% 1/4W F
				R625	1-249-377-11	CARBON	0.47 5% 1/4W F
				R627	1-249-377-11	CARBON	0.47 5% 1/4W F
				R628	1-249-377-11	CARBON	0.47 5% 1/4W F
				R629	1-249-388-11	CARBON	3.9 5% 1/4W F

BM-Y127

RM-Y127

RM-Y127

BM-Y127

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark  are critical for safety.
Replace only with part number specified.

D

E

(KV-32XBR45/32XBR85)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R630	1-215-857-11	METAL OXIDE	10	5%	1W	F	
R632	1-249-417-11	CARBON	1K	5%	1/4W	F	T501 A. 1-453-146-11 TRANSFORMER ASSY, FLYBACK (NX-2604A3)
R633	1-249-405-11	CARBON	100	5%	1/4W	F	T502 1-437-195-11 TRANSFORMER, HORIZONTAL DRIVE
R635	1-249-413-11	CARBON	470	5%	1/4W	F	T503 A. 1-424-545-11 TRANSFORMER, FERRITE (PMT)
R636	1-249-383-11	CARBON	1.5	5%	1/4W	F	T601 A. 1-423-593-11 TRANSFORMER, LINE FILTER (LFT)
R637	1-249-421-11	CARBON	2.2K	5%	1/4W		T602 A. 1-424-220-11 TRANSFORMER, LINE FILTER
R638	1-249-423-11	CARBON	3.3K	5%	1/4W		
R639	1-249-423-11	CARBON	3.3K	5%	1/4W		T603 1-423-563-11 TRANSFORMER, CONVERTER DRIVE
R640	1-202-730-00	SOLID	8.2M	20%	1/2W		T604 1-423-615-11 TRANSFORMER, CONVERTER (PIT)
R643	1-216-395-00	METAL OXIDE	3.3	5%	3W	F	T605 1-423-582-11 TRANSFORMER, FERRITE (SBT)
R644	1-212-853-00	FUSIBLE	6.8	5%	1/4W	F	
R645	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R646	1-249-429-11	CARBON	10K	5%	1/4W		THP601 1-809-539-11 THERMISTOR, POSITIVE
R647	1-247-863-91	CARBON	22K	5%	1/4W		
R648	1-249-414-11	CARBON	560	5%	1/4W		
R649	1-216-431-11	METAL OXIDE	560	5%	1W	F	
R650	1-249-405-11	CARBON	100	5%	1/4W	F	VDR601 1-807-288-11 VARISTOR
R651	1-216-395-00	METAL OXIDE	3.3	5%	3W	F	VDR602 1-810-053-11 VARISTOR
R653	1-249-381-11	CARBON	1	5%	1/4W		VDR603 1-810-053-11 VARISTOR
R654	1-216-385-11	METAL OXIDE	0.47	5%	3W	F	
R655	1-249-417-11	CARBON	1K	5%	1/4W	F	
R656	1-249-381-11	CARBON	1	5%	1/4W		*****
R657	1-249-417-11	CARBON	1K	5%	1/4W		*****
R658	1-249-389-11	CARBON	4.7	5%	1/4W	F	*****
R659	1-247-883-00	CARBON	150K	5%	1/4W		* A-1343-014-A E BOARD, COMPLETE *****
R660	1-247-863-91	CARBON	22K	5%	1/4W		
R661	1-249-406-11	CARBON	120	5%	1/4W		
R662	1-249-393-11	CARBON	10	5%	1/4W		1-508-765-00 PIN, CONNECTOR (5mm PITCH) 3P
R663	1-247-737-11	CARBON	68	5%	1/2W	F	4-382-854-11 SCREW (M3X10), P, SW (+)
R664	1-215-907-11	METAL OXIDE	22	5%	3W	F	
R683	1-205-998-11	WIREWOUND	1	5%	10W		
R684	1-205-998-11	WIREWOUND	1	5%	10W		
R687	1-216-359-00	METAL OXIDE	6.8	5%	1W	F	
R690	1-249-423-11	CARBON	3.3K	5%	1/4W		C1501 1-126-935-11 ELECT 470µF 20% 16V
R691	1-249-423-11	CARBON	3.3K	5%	1/4W		C1502 1-137-372-11 FILM 0.022µF 5% 50V
R693	1-216-389-11	METAL OXIDE	1	5%	3W	F	C1503 1-102-234-00 CERAMIC 270PF 10% 500V
R699	1-216-492-11	METAL OXIDE	82K	5%	3W	F	C1504 1-136-165-00 FILM 0.1µF 5% 50V
R2209	1-249-427-11	CARBON	6.8K	5%	1/4W		C1505 1-126-964-11 ELECT 10µF 20% 50V
R2210	1-249-431-11	CARBON	15K	5%	1/4W		
R2211	1-249-427-11	CARBON	6.8K	5%	1/4W		C1507 1-126-964-11 ELECT 10µF 20% 50V
R2212	1-249-431-11	CARBON	15K	5%	1/4W		C1509 1-136-165-00 FILM 0.1µF 5% 50V
R2215	1-249-425-11	CARBON	4.7K	5%	1/4W		C1510 1-137-370-11 FILM 0.01µF 5% 50V
R2216	1-249-437-11	CARBON	47K	5%	1/4W		C1516 1-136-165-00 FILM 0.1µF 5% 50V
R2217	1-249-435-11	CARBON	33K	5%	1/4W		C1519 1-136-104-00 FILM 0.16µF 5% 200V
R2218	1-249-441-11	CARBON	100K	5%	1/4W		
R2219	1-249-413-11	CARBON	470	5%	1/4W		C1522 1-126-952-11 ELECT 1000µF 20% 16V
R2220	1-249-430-11	CARBON	12K	5%	1/4W		C1523 1-136-177-00 FILM 1µF 5% 50V
R2221	1-249-430-11	CARBON	12K	5%	1/4W		C1524 1-124-927-11 ELECT 4.7µF 20% 50V
R2222	1-249-398-11	CARBON	27	5%	1/4W		C1529 1-126-964-11 ELECT 10µF 20% 50V
R2223	1-249-418-11	CARBON	1.2K	5%	1/4W	F	C1530 1-126-964-11 ELECT 10µF 20% 50V
R2224	1-249-418-11	CARBON	1.2K	5%	1/4W	F	
R2225	1-249-398-11	CARBON	27	5%	1/4W		C1532 1-124-927-11 ELECT 4.7µF 20% 50V
R2226	1-249-385-11	CARBON	2.2	5%	1/4W	F	C1533 1-128-551-11 ELECT 22µF 20% 25V
R2227	1-249-385-11	CARBON	2.2	5%	1/4W	F	C1542 1-126-967-11 ELECT 47µF 20% 16V
R2228	1-249-421-11	CARBON	2.2K	5%	1/4W		C1550 1-136-756-11 FILM 0.24µF 5% 200V
R2229	1-249-421-11	CARBON	2.2K	5%	1/4W		
<CONNECTOR>							
<RELAY>							
RY601	A. 1-515-516-00	RELAY			D1501	8-719-911-19 DIODE 1SS119-25	
RY602	A. 1-515-516-00	RELAY			D1501	8-719-991-33 DIODE 1SS133T-77	
<SWITCH>							
S501	1-572-707-11	SWITCH, LEVER			D1502	8-719-801-35 THYRISTOR SHOR3D42(N)	
S502	1-572-707-11	SWITCH, LEVER			D1503	8-719-980-78 DIODE ERA83-006	
					D1504	8-719-302-43 DIODE EL1Z	
<TRANSFORMER>							
					D1505	8-719-911-19 DIODE 1SS119-25	
					D1506	8-719-911-19 DIODE 1SS119-25	
					D1507	8-719-911-19 DIODE 1SS119-25	
					D1508	8-719-110-17 DIODE RD10ESB2	
					D1509	8-719-110-17 DIODE RD10ESB2	

E**HB****HC**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D1510	8-719-911-19	DIODE 1SS119-25		R1568	1-247-891-00	CARBON	330K 5% 1/4W
D1513	8-719-302-43	DIODE EL1Z		R1569	1-249-413-11	CARBON	470 5% 1/4W
D1515	8-719-911-19	DIODE 1SS119-25		R1578	1-249-423-11	CARBON	3.3K 5% 1/4W
D1516	8-719-987-87	DIODE ERA85-009		R1582	1-249-411-11	CARBON	330 5% 1/4W
D1517	8-719-911-19	DIODE 1SS119-25		R1583	1-249-421-11	CARBON	2.2K 5% 1/4W
			<IC>	R1585	1-249-441-11	CARBON	100K 5% 1/4W
IC1501	8-752-052-88	IC CXA1526P		R1586	1-247-891-00	CARBON	330K 5% 1/4W
IC1502	8-759-701-59	IC NJM78M09FA					*****
IC1504	8-759-135-80	IC μPC358C					*****
							* A-1372-120-A HB BOARD, COMPLETE

			<COIL>				
L1503	1-459-592-11	COIL (WITH CORE) (PMC)					
L1504	1-459-474-11	COIL (WITH CORE)					
							<CAPACITOR>
			<TRANSISTOR>	C1004	1-124-584-00	ELECT	100μF 20% 10V
Q1501	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q1502	8-729-140-96	TRANSISTOR 2SD774-34					
Q1503	8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q1506	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q1507	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q1508	8-729-140-93	TRANSISTOR 2SB733-34					
Q1509	8-729-140-93	TRANSISTOR 2SB733-34					
Q1511	8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q1514	8-729-019-01	TRANSISTOR 2SD2394-EF					
Q1519	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q1520	8-729-119-78	TRANSISTOR 2SC2785-HFE					
							<IC>
			<RESISTOR>	IC1001	8-741-818-51	ELEMENT, RAY-CATCHER SBX1818-51	
R1501	1-247-815-91	CARBON	220 5% 1/4W				
R1502	1-247-815-91	CARBON	220 5% 1/4W				
R1503	1-249-435-11	CARBON	33K 5% 1/4W				
R1504	1-249-429-11	CARBON	10K 5% 1/4W				
R1505	1-249-421-11	CARBON	2.2K 5% 1/4W				
R1506	1-249-423-11	CARBON	3.3K 5% 1/4W				
R1507	1-249-410-11	CARBON	270 5% 1/4W				
R1508	1-249-437-11	CARBON	47K 5% 1/4W				
R1509	1-249-429-11	CARBON	10K 5% 1/4W				
R1510	1-215-461-00	METAL	47K 1% 1/4W				
R1511	1-216-379-11	METAL OXIDE	6.8 5% 2W F				
R1513	1-249-423-11	CARBON	3.3K 5% 1/4W				
R1514	1-247-885-00	CARBON	180K 5% 1/4W				
R1515	1-215-905-11	METAL OXIDE	10 5% 3W F				
R1519	1-249-417-11	CARBON	1K 5% 1/4W				
R1520	1-249-417-11	CARBON	1K 5% 1/4W				
R1522	1-249-417-11	CARBON	1K 5% 1/4W				
R1527	1-249-417-11	CARBON	1K 5% 1/4W				
R1528	1-249-438-11	CARBON	56K 5% 1/4W				
R1529	1-249-434-11	CARBON	27K 5% 1/4W				
R1530	1-249-432-11	CARBON	18K 5% 1/4W				
R1533	1-249-427-11	CARBON	6.8K 5% 1/4W				
R1534	1-249-424-11	CARBON	3.9K 5% 1/4W				
R1535	1-249-425-11	CARBON	4.7K 5% 1/4W				
R1536	1-215-857-11	METAL OXIDE	10 5% 1W F				
R1537	1-249-404-00	CARBON	82 5% 1/4W				
R1538	1-216-379-11	METAL OXIDE	6.8 5% 2W F				
R1541	1-249-441-11	CARBON	100K 5% 1/4W				
R1543	1-249-414-11	CARBON	560 5% 1/4W				
R1546	1-215-885-00	METAL OXIDE	68 5% 2W F				
R1552	1-249-426-11	CARBON	5.6K 5% 1/4W				
R1554	1-249-393-11	CARBON	10 5% 1/4W				
R1556	1-249-438-11	CARBON	56K 5% 1/4W				
R1559	1-249-429-11	CARBON	10K 5% 1/4W				
R1564	1-249-435-11	CARBON	33K 5% 1/4W				
							<CONNECTOR>

KV-27XBR45/27XBR45M/32XBR45/32XBR85

RM-Y127

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RM-Y127

RM-Y127

HC**W****X**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
CN154	* 1-564-508-11	PLUG, CONNECTOR 5P		Q2762	8-729-216-22	TRANSISTOR 2SA1162-G	
		<JACK>		Q2763	8-729-017-05	TRANSISTOR 2SA1837	
J1001	1-695-586-11	JACK BLOCK, PIN (L TYPE) 3P		Q2764	8-729-422-27	TRANSISTOR 2SD601A-Q	
		<RESISTOR>		Q2765	8-729-017-06	TRANSISTOR 2SC4793	
R1001	1-247-804-11	CARBON	75	5%	1/4W		
R1002	1-249-425-11	CARBON	4.7K	5%	1/4W		
R1003	1-247-895-91	CARBON	470K	5%	1/4W		
R1004	1-249-425-11	CARBON	4.7K	5%	1/4W		
R1005	1-247-895-91	CARBON	470K	5%	1/4W		

* A-1372-122-A W BOARD, COMPLETE							

4-382-854-11 SCREW (M3X10), P, SW (+)							
<CAPACITOR>							
C2753	1-163-035-00	CERAMIC CHIP	0.047μF	50V			
C2761	1-161-830-00	CERAMIC	0.0047μF	500V			
C2762	1-163-101-00	CERAMIC CHIP	22PF	5%	50V		
C2763	1-107-638-11	ELECT	33μF	20%	160V		
C2764	1-126-934-11	ELECT	220μF	20%	16V		
C2767	1-102-244-00	CERAMIC	220PF	10%	500V		
C2768	1-106-383-00	MYLAR	0.047μF	10%	200V		
C2769	1-107-667-11	ELECT	2.2μF	20%	160V		
C2770	1-106-391-12	MYLAR	0.1μF	10%	200V		
C2771	1-126-964-11	ELECT	10μF	20%	50V		
C2772	1-126-933-11	ELECT	100μF	20%	16V		
C2773	1-106-383-00	MYLAR	0.047μF	10%	200V		
C2774	1-163-111-00	CERAMIC CHIP	56PF	5%	50V		
C2775	1-126-934-11	ELECT	220μF	20%	16V		
C2776	1-126-964-11	ELECT	10μF	20%	50V		
C2778	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V		
C2779	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V		
C2780	1-126-964-11	ELECT	10μF	20%	50V		
C2781	1-102-106-00	CERAMIC	100PF	10%	50V		
C2790	1-126-967-11	ELECT	47μF	20%	16V		
<CONNECTOR>							
CN128	* 1-564-509-11	PLUG, CONNECTOR 6P					
CN130	1-564-506-11	PLUG, CONNECTOR 3P					

* A-1390-514-A X BOARD, COMPLETE							

<DIODE>							
D2761	8-719-404-46	DIODE MA110					
D2762	8-719-404-46	DIODE MA110					
D2763	8-719-404-46	DIODE MA110					
D2764	8-719-404-46	DIODE MA110					
D2765	8-719-404-46	DIODE MA110					
D2766	8-719-404-46	DIODE MA110					
D2767	8-719-110-90	DIODE RD39ESB4					
D2768	8-719-110-90	DIODE RD39ESB4					
<COIL>							
L2762	1-408-418-00	INDUCTOR 56μH					
L2764	1-410-478-11	INDUCTOR 47μH					
<TRANSISTOR>							
Q2761	8-729-422-27	TRANSISTOR 2SD601A-Q					
<CAPACITOR>							
C2500	1-126-964-11	ELECT	10μF	20%	50V		
C2501	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V		
C2502	1-124-927-11	ELECT	4.7μF	20%	50V		
C2503	1-124-927-11	ELECT	4.7μF	20%	50V		
C2505	1-124-927-11	ELECT	4.7μF	20%	50V		
C2506	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V		
C2507	1-124-902-00	ELECT	0.47μF	20%	50V		
C2508	1-163-035-00	CERAMIC CHIP	0.047μF	50V			
C2509	1-163-001-11	CERAMIC CHIP	220PF	10%	50V		
C2511	1-126-111-11	ELECT	3.3μF	20%	50V		
C2513	1-163-001-11	CERAMIC CHIP	220PF	10%	50V		
C2514	1-163-035-00	CERAMIC CHIP	0.047μF	50V			
C2515	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V		
C2516	1-124-902-00	ELECT	0.47μF	20%	50V		
C2517	1-124-927-11	ELECT	4.7μF	20%	50V		

X **Z**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
C2519	1-124-927-11	ELECT	4.7μF 20%	50V	D904	8-719-109-93	DIODE RD6.2ESB2	
C2520	1-124-927-11	ELECT	4.7μF 20%	50V	D906	8-719-121-24	DIODE RD9.1ESL	
C2521	1-163-009-11	CERAMIC CHIP	0.001μF 10%	50V	D907	8-719-404-46	DIODE MA110	
C2522	1-124-903-11	ELECT	1μF 20%	50V	D908	8-719-404-46	DIODE MA110	
C2523	1-126-933-11	ELECT	100μF 20%	16V	D909	8-719-404-46	DIODE MA110	
C2524	1-124-902-00	ELECT	0.47μF 20%	50V	D910	8-719-404-46	DIODE MA110	
C2525	1-126-933-11	ELECT	100μF 20%	16V	D913	8-719-404-46	DIODE MA110	
C2526	1-124-902-00	ELECT	0.47μF 20%	50V	D914	8-719-908-03	DIODE GP08D	
C2527	1-126-933-11	ELECT	100μF 20%	16V	D915	8-719-908-03	DIODE GP08D	
C2528	1-163-034-00	CERAMIC CHIP	0.033μF 50V		D916	8-719-110-18	DIODE RD10ESB3	
C2529	1-163-017-00	CERAMIC CHIP	0.0047μF 10%	50V	D917	8-719-110-18	DIODE RD10ESB3	
C2530	1-163-017-00	CERAMIC CHIP	0.0047μF 10%	50V	D918	8-719-110-18	DIODE RD10ESB3	
C2531	1-163-034-00	CERAMIC CHIP	0.033μF 50V		D919	8-719-110-18	DIODE RD10ESB3	
C2534	1-124-925-11	ELECT	2.2μF 20%	50V				
C2535	1-124-925-11	ELECT	2.2μF 20%	50V				
C2536	1-124-903-11	ELECT	1μF 20%	50V			<JACK>	
				J901	1-764-873-11	JACK		
				J902	1-764-873-11	JACK		
CN2500 * 1-564-515-11 PLUG, CONNECTOR 12P								
							<CHIP CONDUCTOR>	
				JR901	1-216-295-91	CONDUCTOR, CHIP		
IC2500	8-759-253-06	IC XR1071CP		JR902	1-216-295-91	CONDUCTOR, CHIP		
IC2501	8-759-090-21	IC TDA8424		JR903	1-216-295-91	CONDUCTOR, CHIP		
				JR904	1-216-295-91	CONDUCTOR, CHIP		
				JR905	1-216-295-91	CONDUCTOR, CHIP		
				JR907	1-216-295-91	CONDUCTOR, CHIP		
<TRANSISTOR>								
Q2500	8-729-216-22	TRANSISTOR 2SA1162-G					<TRANSISTOR>	
Q2501	8-729-422-27	TRANSISTOR 2SD601A-Q						
				Q901	8-729-422-27	TRANSISTOR 2SD601A-Q		
				Q902	8-729-216-22	TRANSISTOR 2SA1162-G		
				Q905	8-729-422-27	TRANSISTOR 2SD601A-Q		
				Q906	8-729-422-27	TRANSISTOR 2SD601A-Q		
R2501	1-216-101-00	METAL GLAZE	150K 5%	1/10W	Q907	8-729-216-22	TRANSISTOR 2SA1162-G	
R2502	1-247-807-31	CARBON	100 5%	1/4W				
R2503	1-247-807-31	CARBON	100 5%	1/4W	Q908	8-729-216-22	TRANSISTOR 2SA1162-G	
R2504	1-216-097-91	METAL GLAZE	100K 5%	1/10W	Q909	8-729-216-22	TRANSISTOR 2SA1162-G	
R2506	1-249-441-11	CARBON	100K 5%	1/4W	Q913	8-729-422-27	TRANSISTOR 2SD601A-Q	
R2509	1-216-049-91	METAL GLAZE	1K 5%	1/10W	Q914	8-729-422-27	TRANSISTOR 2SD601A-Q	
R2510	1-216-049-91	METAL GLAZE	1K 5%	1/10W	Q915	8-729-422-27	TRANSISTOR 2SD601A-Q	
R2511	1-249-418-11	CARBON	1.2K 5%	1/4W				
R2516	1-249-425-11	CARBON	4.7K 5%	1/4W				
							<RESISTOR>	
				R901	1-249-405-11	CARBON 100 5%	1/4W F	
				R906	1-216-089-91	METAL GLAZE 47K 5%	1/10W	
				R907	1-216-089-91	METAL GLAZE 47K 5%	1/10W	
				R909	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	
				R910	1-216-097-91	METAL GLAZE 100K 5%	1/10W	
				R911	1-216-105-91	METAL GLAZE 220K 5%	1/10W	
				R912	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	
				R913	1-216-101-00	METAL GLAZE 150K 5%	1/10W	
				R921	1-216-089-91	METAL GLAZE 47K 5%	1/10W	
				R922	1-216-073-00	METAL GLAZE 10K 5%	1/10W	
				R923	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	
				R924	1-216-073-00	METAL GLAZE 10K 5%	1/10W	
				R925	1-216-041-00	METAL GLAZE 470 5%	1/10W	
				R926	1-216-025-91	METAL GLAZE 100 5%	1/10W	
				R927	1-216-097-91	METAL GLAZE 100K 5%	1/10W	
				R928	1-216-097-91	METAL GLAZE 100K 5%	1/10W	
				R929	1-249-405-11	CARBON 100 5%	1/4W F	
				R930	1-216-089-91	METAL GLAZE 47K 5%	1/10W	
				R931	1-216-089-91	METAL GLAZE 47K 5%	1/10W	
				R932	1-216-689-11	METAL GLAZE 39K 5%	1/10W	
				R933	1-216-049-91	METAL GLAZE 1K 5%	1/10W	
				R934	1-216-049-91	METAL GLAZE 1K 5%	1/10W	
				R935	1-216-073-00	METAL GLAZE 10K 5%	1/10W	
				R936	1-216-089-91	METAL GLAZE 47K 5%	1/10W	
				R938	1-216-295-91	CONDUCTOR, CHIP		
* A-1390-515-A Z BOARD, COMPLETE								
<CAPACITOR>								
C901	1-124-903-11	ELECT	1μF 20%	50V				
C930	1-126-940-11	ELECT	330μF 20%	16V				
C931	1-126-967-11	ELECT	47μF 20%	16V				
C932	1-124-927-11	ELECT	4.7μF 20%	50V				
C934	1-126-964-11	ELECT	10μF 20%	50V				
<CONNECTOR>								
CN901	* 1-564-520-11	PLUG, CONNECTOR 5P						
CN903	* 1-564-517-11	PLUG, CONNECTOR 2P						
CN904	* 1-564-505-11	PLUG, CONNECTOR 2P						
CN905	* 1-564-522-11	PLUG, CONNECTOR 7P						
<DIODE>								
D901	8-719-121-24	DIODE RD9.1ESL						
D902	8-719-404-46	DIODE MA110						
D903	8-719-404-46	DIODE MA110						

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Z **U**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<RELAY>							
RY901 1-755-028-11 RELAY							
RY902 1-755-028-11 RELAY							
<TAB>							
TB901	1-537-712-11	TERMINAL, PUSH		D401	8-719-110-17	DIODE RD10ESB2	

* A-1394-659-A U BOARD, COMPLETE							

<CAPACITOR>							
C401	1-163-031-11	CERAMIC CHIP	0.01μF		D411	8-719-110-17	DIODE RD10ESB2
C402	1-128-551-11	ELECT	22μF	20%	D423	8-719-110-36	DIODE RD13ESB2
C403	1-126-933-11	ELECT	100μF	20%	D424	8-719-110-36	DIODE RD13ESB2
C404	1-126-964-11	ELECT	10μF	20%	D425	8-719-110-36	DIODE RD13ESB2
C405	1-128-551-11	ELECT	22μF	20%	D426	8-719-109-66	DIODE RD3.3ESB2
C406	1-124-903-11	ELECT	1μF	20%	D429	8-719-110-17	DIODE RD10ESB2
C407	1-124-903-11	ELECT	1μF	20%	D430	8-719-110-17	DIODE RD10ESB2
C408	1-128-551-11	ELECT	22μF	20%	D431	8-719-110-17	DIODE RD10ESB2
C409	1-124-903-11	ELECT	1μF	20%	D436	8-719-110-17	DIODE RD10ESB2
C410	1-124-903-11	ELECT	1μF	20%	D437	8-719-110-17	DIODE RD10ESB2
C412	1-128-551-11	ELECT	22μF	20%	D445	8-719-510-48	DIODE D1N20R
C413	1-126-964-11	ELECT	10μF	20%	<IC>		
C414	1-109-889-11	ELECT	1μF	20%	IC402	8-752-068-46	IC CXA1855S
C415	1-109-889-11	ELECT	1μF	20%	IC405	8-759-701-01	IC NJM2904M
C417	1-124-902-00	ELECT	0.47μF	20%	<JACK>		
C418	1-124-902-00	ELECT	0.47μF	20%	J401	1-750-515-11	TERMINAL BLOCK, S 3P
C420	1-163-031-11	CERAMIC CHIP	0.01μF		J402	1-750-517-11	JACK BLOCK, PIN 3P
C421	1-128-551-11	ELECT	22μF	20%	J403	1-750-545-11	JACK BLOCK, PIN 3P
C428	1-126-964-11	ELECT	10μF	20%	J404	1-750-516-11	JACK BLOCK, PIN 2P
C430	1-109-889-11	ELECT	1μF	20%	J406	1-750-517-11	JACK BLOCK, PIN 3P
C431	1-109-889-11	ELECT	1μF	20%	<CHIP CONDUCTOR>		
C432	1-128-551-11	ELECT	22μF	20%	JR402	1-216-295-91	CONDUCTOR, CHIP
C433	1-104-663-11	ELECT	33μF	20%	JR403	1-216-295-91	CONDUCTOR, CHIP
C434	1-163-117-00	CERAMIC CHIP	100PF	5%	JR408	1-216-295-91	CONDUCTOR, CHIP
C440	1-104-664-11	ELECT	47μF	20%	JR410	1-216-295-91	CONDUCTOR, CHIP
C441	1-126-967-11	ELECT	47μF	20%	JR411	1-216-295-91	CONDUCTOR, CHIP
C442	1-216-295-91	CONDUCTOR, CHIP		<CONNECTOR>			
C447	1-126-935-11	ELECT	470μF	20%	JR412	1-216-295-91	CONDUCTOR, CHIP
C448	1-124-902-00	ELECT	0.47μF	20%	JR415	1-216-295-91	CONDUCTOR, CHIP
C449	1-124-902-00	ELECT	0.47μF	20%	JR418	1-216-295-91	CONDUCTOR, CHIP
C450	1-107-721-11	ELECT	4.7μF	20%	JR419	1-216-295-91	CONDUCTOR, CHIP
C451	1-104-663-11	ELECT	33μF	20%	JR420	1-216-295-91	CONDUCTOR, CHIP
C452	1-124-927-11	ELECT	4.7μF	20%	JR421	1-216-295-91	CONDUCTOR, CHIP
C453	1-124-927-11	ELECT	4.7μF	20%	JR422	1-216-295-91	CONDUCTOR, CHIP
C454	1-124-927-11	ELECT	4.7μF	20%	JR423	1-216-295-91	CONDUCTOR, CHIP
C455	1-107-721-11	ELECT	4.7μF	20%	JR428	1-216-295-91	CONDUCTOR, CHIP
C456	1-124-927-11	ELECT	4.7μF	20%	JR429	1-216-295-91	CONDUCTOR, CHIP
C462	1-126-933-11	ELECT	100μF	20%	JR430	1-216-295-91	CONDUCTOR, CHIP
C463	1-126-933-11	ELECT	100μF	20%	JR431	1-216-295-91	CONDUCTOR, CHIP
<CONNECTOR>							
CN141	* 1-564-520-11	PLUG, CONNECTOR 5P		JR434	1-216-295-91	CONDUCTOR, CHIP	
CN142	* 1-564-521-11	PLUG, CONNECTOR 6P		JR498	1-216-295-91	CONDUCTOR, CHIP	
CN143	1-750-395-11	SOCKET, CONNECTOR 32P		JR499	1-216-295-91	CONDUCTOR, CHIP	
CN144	1-564-524-11	PLUG, CONNECTOR 9P		JR502	1-216-295-91	CONDUCTOR, CHIP	
CN145	* 1-564-521-11	PLUG, CONNECTOR 6P		<COIL>			
CN146	1-573-300-21	CONNECTOR, BOARD TO BOARD 18P		L401	1-410-473-11	INDUCTOR 18μH	
CN147	1-750-395-11	SOCKET, CONNECTOR 32P					
CN148	1-564-517-11	PLUG, CONNECTOR 2P					

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

U

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
L405	1-410-669-31	INDUCTOR 33 μ H		R464	1-216-045-00	METAL GLAZE 680	5% 1/10W
		<TRANSISTOR>		R465	1-216-097-91	METAL GLAZE 100K	5% 1/10W
Q401	8-729-422-27	TRANSISTOR 2SD601A-Q		R466	1-216-025-91	METAL GLAZE 100	5% 1/10W
Q405	8-729-216-22	TRANSISTOR 2SA1162-G		R475	1-216-049-91	METAL GLAZE 1K	5% 1/10W
Q406	8-729-216-22	TRANSISTOR 2SA1162-G		R476	1-216-081-00	METAL GLAZE 22K	5% 1/10W
Q407	8-729-422-27	TRANSISTOR 2SD601A-Q		R479	1-216-081-00	METAL GLAZE 22K	5% 1/10W
Q408	8-729-422-27	TRANSISTOR 2SD601A-Q		R480	1-216-081-00	METAL GLAZE 22K	5% 1/10W
Q410	8-729-422-27	TRANSISTOR 2SD601A-Q		R481	1-216-081-00	METAL GLAZE 22K	5% 1/10W
Q411	8-729-422-27	TRANSISTOR 2SD601A-Q		R482	1-249-417-11	CARBON 1K	5% 1/4W
Q414	8-729-422-27	TRANSISTOR 2SD601A-Q		R483	1-249-417-11	CARBON 1K	5% 1/4W
Q415	8-729-422-27	TRANSISTOR 2SD601A-Q		R487	1-216-041-00	METAL GLAZE 470	5% 1/10W
Q416	8-729-216-22	TRANSISTOR 2SA1162-G		R488	1-216-081-00	METAL GLAZE 22K	5% 1/10W
Q417	8-729-216-22	TRANSISTOR 2SA1162-G		R489	1-216-081-00	METAL GLAZE 22K	5% 1/10W
Q418	8-729-216-22	TRANSISTOR 2SA1162-G		R490	1-216-295-91	CONDUCTOR, CHIP	
Q419	8-729-422-27	TRANSISTOR 2SD601A-Q		R491	1-216-295-91	CONDUCTOR, CHIP	
Q421	8-729-216-22	TRANSISTOR 2SA1162-G		R492	1-216-295-91	CONDUCTOR, CHIP	
Q422	8-729-216-22	TRANSISTOR 2SA1162-G		R493	1-216-041-00	METAL GLAZE 470	5% 1/10W
Q423	8-729-216-22	TRANSISTOR 2SA1162-G		R494	1-249-403-11	CARBON 68	5% 1/4W
Q424	8-729-422-27	TRANSISTOR 2SD601A-Q		R495	1-216-113-00	METAL GLAZE 470K	5% 1/10W
Q425	8-729-422-27	TRANSISTOR 2SD601A-Q		R496	1-216-113-00	METAL GLAZE 470K	5% 1/10W
		<RESISTOR>		R497	1-216-113-00	METAL GLAZE 470K	5% 1/10W
R400	1-216-025-91	METAL GLAZE 100	5% 1/10W	R498	1-216-025-91	METAL GLAZE 100	5% 1/10W
R401	1-247-804-11	CARBON 75	5% 1/4W	R499	1-216-025-91	METAL GLAZE 100	5% 1/10W
R402	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R1400	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R403	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R1401	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R404	1-247-804-11	CARBON 75	5% 1/4W	R1402	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R405	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R1403	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R406	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R1404	1-249-393-11	CARBON 10	5% 1/4W F
R407	1-247-804-11	CARBON 75	5% 1/4W	R1405	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R408	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R1406	1-216-085-00	METAL GLAZE 33K	5% 1/10W
R409	1-216-113-00	METAL GLAZE 470K	5% 1/10W	R1407	1-216-001-00	METAL GLAZE 10	5% 1/10W
R410	1-249-425-11	CARBON 4.7K	5% 1/4W	R1408	1-216-097-91	METAL GLAZE 100K	5% 1/10W
R411	1-249-425-11	CARBON 4.7K	5% 1/4W	R1409	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
R412	1-249-425-11	CARBON 4.7K	5% 1/4W	R1410	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R413	1-249-425-11	CARBON 4.7K	5% 1/4W	R1411	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R414	1-247-804-11	CARBON 75	5% 1/4W	R1415	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R415	1-249-425-11	CARBON 4.7K	5% 1/4W	R1416	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R416	1-216-647-11	METAL CHIP 680	0.50% 1/10W	R1422	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R417	1-216-043-91	METAL GLAZE 560	5% 1/10W	R1423	1-216-025-91	METAL GLAZE 100	5% 1/10W
R419	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R1424	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R421	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R1425	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R425	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R1426	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W
R427	1-216-001-00	METAL GLAZE 10	5% 1/10W	R1435	1-216-083-00	METAL GLAZE 27K	5% 1/10W
R429	1-216-097-91	METAL GLAZE 100K	5% 1/10W	R1436	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R432	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1437	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R435	1-216-033-00	METAL GLAZE 220	5% 1/10W				
R439	1-216-049-91	METAL GLAZE 1K	5% 1/10W				
R441	1-216-049-91	METAL GLAZE 1K	5% 1/10W				
R442	1-216-025-91	METAL GLAZE 100	5% 1/10W				
R443	1-216-025-91	METAL GLAZE 100	5% 1/10W				
R444	1-216-095-00	METAL GLAZE 82K	5% 1/10W				
R445	1-216-073-00	METAL GLAZE 10K	5% 1/10W				
R446	1-216-073-00	METAL GLAZE 10K	5% 1/10W				
R450	1-216-025-91	METAL GLAZE 100	5% 1/10W				
R451	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W				
R452	1-216-025-91	METAL GLAZE 100	5% 1/10W				
R454	1-216-025-91	METAL GLAZE 100	5% 1/10W				
R456	1-216-295-91	CONDUCTOR, CHIP					
R457	1-216-033-00	METAL GLAZE 220	5% 1/10W				
R458	1-216-033-00	METAL GLAZE 220	5% 1/10W				
R459	1-216-081-00	METAL GLAZE 22K	5% 1/10W				
R460	1-216-037-00	METAL GLAZE 330	5% 1/10W				
R461	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W				
R462	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W				
R463	1-216-045-00	METAL GLAZE 680	5% 1/10W				

MISCELLANEOUS

 Δ . 1-406-726-13 COIL, DEGAUSSING

(KV-27XBR45/27XBR45M)

 Δ . 1-402-952-12 COIL, DEGAUSSING

(KV-32XBR45/32XBR85)

1-417-178-11 SELECTOR, ANTENNA (AS-2)

1-452-032-00 MAGNET, DISK ; 10mm ϕ 1-452-094-00 MAGNET, ROTATABLE DISK ; 15mm ϕ

 Δ . 1-452-509-42 NECK ASSY, PICTURE TUBE (NA-308)

(KV-27XBR45/27XBR45M)

 Δ . 1-452-579-21 NECK ASSY, PICTURE TUBE (NA322)

(KV-32XBR45/32XBR85)

1-504-322-11 BOX, SPEAKER (10CM,5CM)

(KV-27XBR45/27XBR45M)

1-504-322-21 BOX, SPEAKER (10CM,5CM)

(KV-32XBR45/32XBR85)

1-550-910-21 WOOFER, ACTIVE SUPER (KV-32XBR85)

1-558-787-81 CORD, CONNECTION (KV-32XBR85)

 Δ . 1-751-059-11 CORD, POWER (WITH CONNECTOR) (10A/125V)

KV-27XBR45/27XBR45M/32XBR45/32XBR85

RM-Y127

RM-Y127

RM-Y127

RM-Y127

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
	* 1-751-135-11	CABLE, PIN	
	* 1-751-136-11	CABLE, PIN	
	▲ 8-451-275-42	DEFLECTION YOKE Y28PFA(VTM)	(KV-27XBR45/27XBR45M)
	▲ 8-451-315-41	DEFLECTION YOKE Y34FXA(VTM)	(KV-32XBR45/32XBR85)
	8-913-821-90	TRANSMITTER TMR-D1002 SET	
	8-913-823-90	LUMINOUS UNIT IFP-D1002 SET	
V901	▲ 8-733-848-05	PICTURE TUBE 29PXD (A68KZJ50X)	(KV-27XBR45/27XBR45M)
V901	▲ 8-451-275-42	PICTURE TUBE 29PXD (A68KZJ50X)	(KV-27XBR45/27XBR45M)
V901	▲ 8-733-741-05	PICTURE TUBE 34FXD (A80JYVS1X)	(KV-32XBR45/32XBR85)

ACCESSORIES AND PACKING MATERIALS

- 3-701-627-00 BAG, POLYETHYLENE
- 3-800-378-21 MANUAL, INSTRUCTION
(KV-27XBR45/32XBR45/32XBR85)
- 3-800-378-31 MANUAL, INSTRUCTION (KV-27XBR45)
- 3-800-378-41 MANUAL, INSTRUCTION
(KV-27XBR45/27XBR45M/32XBR45)
- 4-041-255-01 BAG, PROTECTION
(KV-27XBR45/27XBR45M)
- * 4-041-259-01 BAG, PROTECTION (KV-32XBR45/32XBR85)
- * 4-049-534-01 CUSHION (LOWER) (ASSY)
(KV-27XBR45/27XBR45M)
- * 4-049-537-01 CUSHION (UPPER) (ASSY)
(KV-27XBR45/27XBR45M)
- * 4-049-555-01 INDIVIDUAL CARTON (KV-27XBR45)
- * 4-050-355-01 INDIVIDUAL CARTON (KV-27XBR45M)

REMOTE COMMANDER

- 1-473-294-11 REMOTE COMMANDER (RM-Y127)
- 9-907-089-01 POCKET, COVER (FOR RM-Y127)

SONY® SERVICE MANUAL

AA-1A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-27XBR45	RM-Y127	US	SCC-H81A-A	KV-32XBR45	RM-Y127	US	SCC-H81B-A (Serial No. 7,038,538 and later)
KV-27XBR45	RM-Y127	Canadian	SCC-H82A-A	KV-32XBR45	RM-Y127	Canadian	SCC-H82B-A (Serial No. A,701,501 and later)
KV-27XBR45M	RM-Y127	E	SCC-H83A-A	KV-32XBR85	RM-Y127	US	SCC-H81C-A (Serial No. 7,009,901 and later)

SUPPLEMENT-1

SUBJECT: PART CHANGE (CRT,DY)

File this supplement with the Service manual.

INTRODUCTION: DYNAMIC CONVERGENS FREE.(KV-32XBR45/85 only)

SECTION 4. DIAGRAMS

4-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

D board (See page 41)

(Parts change)

REF NO.	PART NO.	DESCRIPTION
C560	-	Not mount
L510	1-411-189-11	15 mA/0.4A
R546	1-247-863-91	22KΩ
R547	1-247-883-00	150KΩ



REF NO.	PART NO.	DESCRIPTION
C560	1-136-131-11	ELECT0.12uF/400V
L510	1-409-955-21	COIL,CHOKE 8 mA/0.5A
R546	1-249-865-11	METAL OXIDE 27KΩ
R547	1-247-865-01	CARBON 120KΩ

E board (See page 68)

Dynamic convergence circuit board E.



Not used-please remove

SECTION 5. EXPLODED VIEWS

5-2. PICTURE TUBE(See page 84)(KV-32XBR45/32XBR85 model only)

REF NO.	PART NO.	DESCRIPTION	REMARK
61	△ 8-733-743-05	PICTURE TUBE (A80)YV51X (KV-32XBR45/32XBR85)	
63	△ 4-451-482-11	DEFLECTION YOKE (Y34FXA2) (KV-32XBR45/32XBR85)	
65	* A-1331-436-B	C BOARD, COMPLETE	

SECTION 6. ELECTRICAL PARTS LIST

C BOARD(See page 91)

REF NO.	PART NO.	DESCRIPTION	REMARK
	* A-1331-436-B	C BOARD, COMPLETE	

SECTION 5. ELECTRICAL PARTS LIST

MISCELLANEOUS(See page 102)(KV-32XBR45/32XBR85 model only)

REF NO.	PART NO.	DESCRIPTION	REMARK
	△ 8-733-743-05	PICTURE TUBE (A80)YV51X (KV-32XBR45/32XBR85)	
	△ 4-451-482-11	DEFLECTION YOKE (Y34FXA2) (KV-32XBR45/32XBR85)	



MICROFILM

※ Please file according to model size.

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32

Sony Corporation
Display Company
Quality Engineering Dept.

9-965-063-81

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Printed in USA
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SONY® SERVICE MANUAL

AA-1A CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-27XBR45	RM-Y127	US	SCC-H81A-A	KV-32XBR45	RM-Y127	US	SCC-H81B-A
KV-27XBR45	RM-Y127	Canadian	SCC-H82A-A	KV-32XBR45	RM-Y127	Canadian	SCC-H82B-A
KV-27XBR45M	RM-Y127	E	SCC-H83A-A	KV-32XBR85	RM-Y127	US	SCC-H81C-A

CORRECTION-1

**SUBJECT: SUPER WOOFER SPEAKER CIRCUIT ADD.
(KV-32XBR85 ONLY)**

File this Correction with the Service manual.

█ : Indicates changed portion

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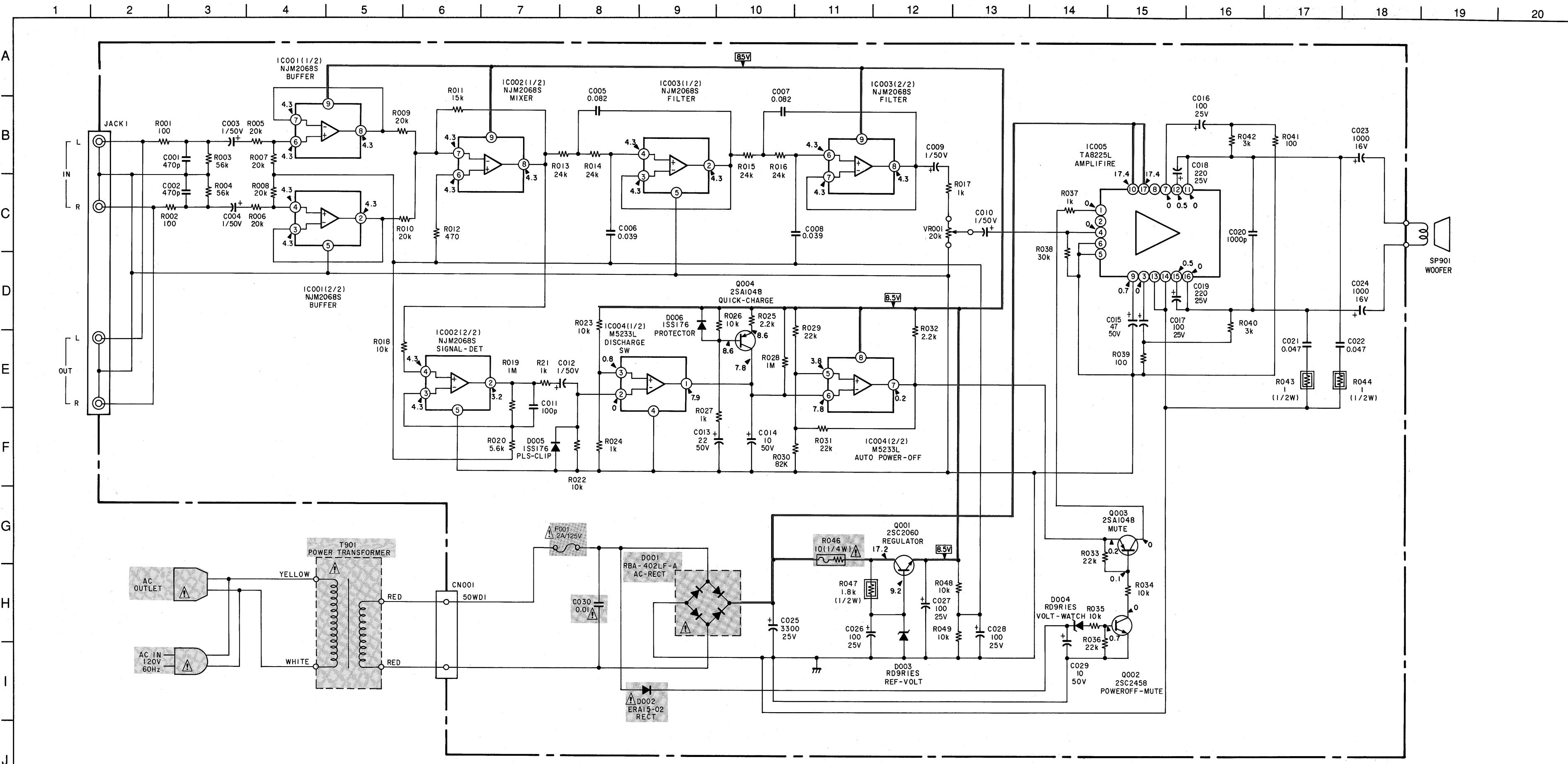
<u>Section</u>	<u>Title</u>	<u>Page</u>
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4-3. Printed Wiring Board and Schematic Diagrams Speaker(Super Woofer)	2	
5. EXPLODED VIEWS		
5-3.Cabinet Base (KV-32XBR85)	7	
6. ELECTRICAL PARTS LIST		
Speaker(Super Woofer Board)	8	



4. DIAGRAMS

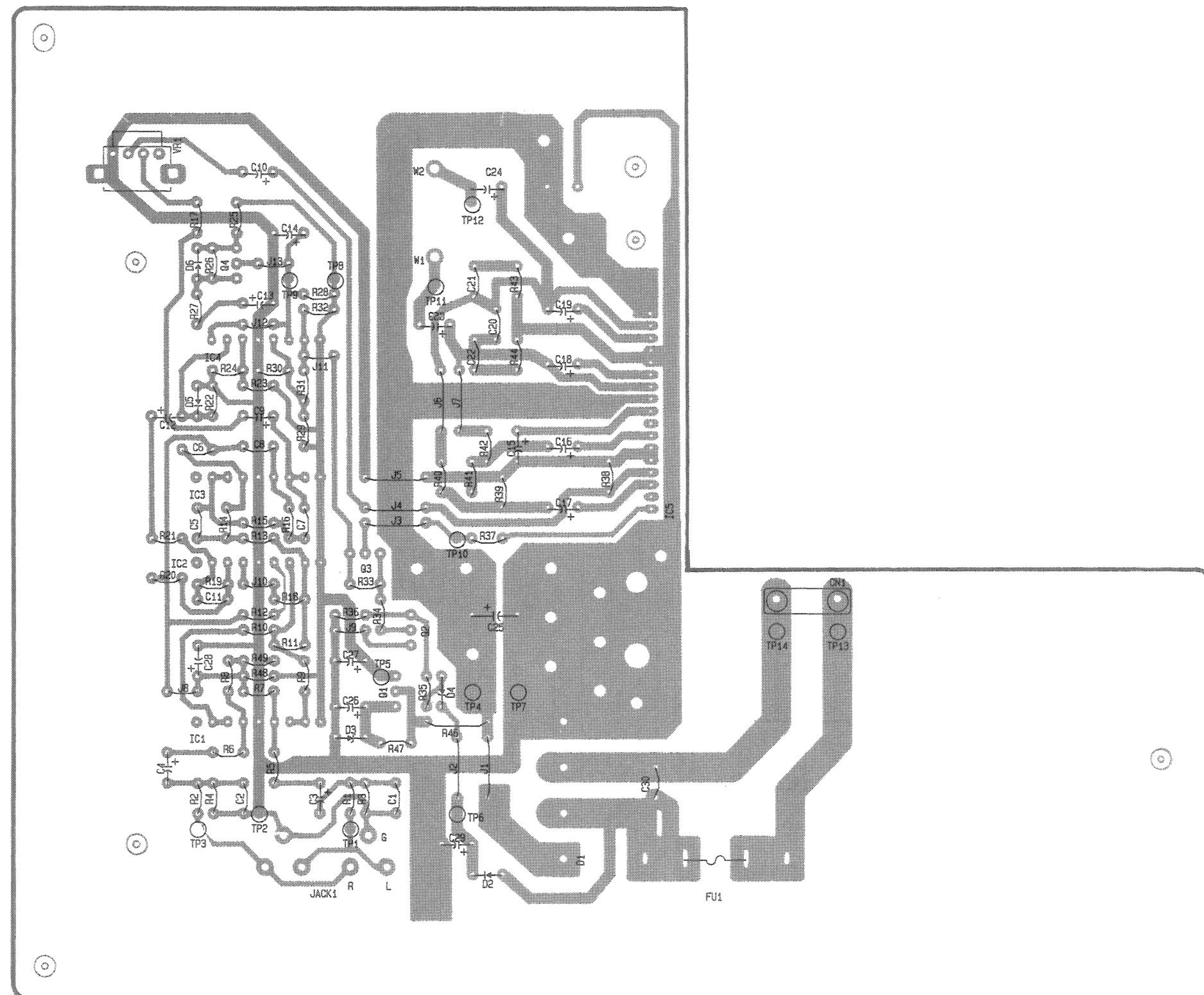
4-3. Printed Wiring Board and Schematic Diagrams

– Speaker (Super Woofer) –



SUPER WOOFER

— SUPER WOOFER Board —

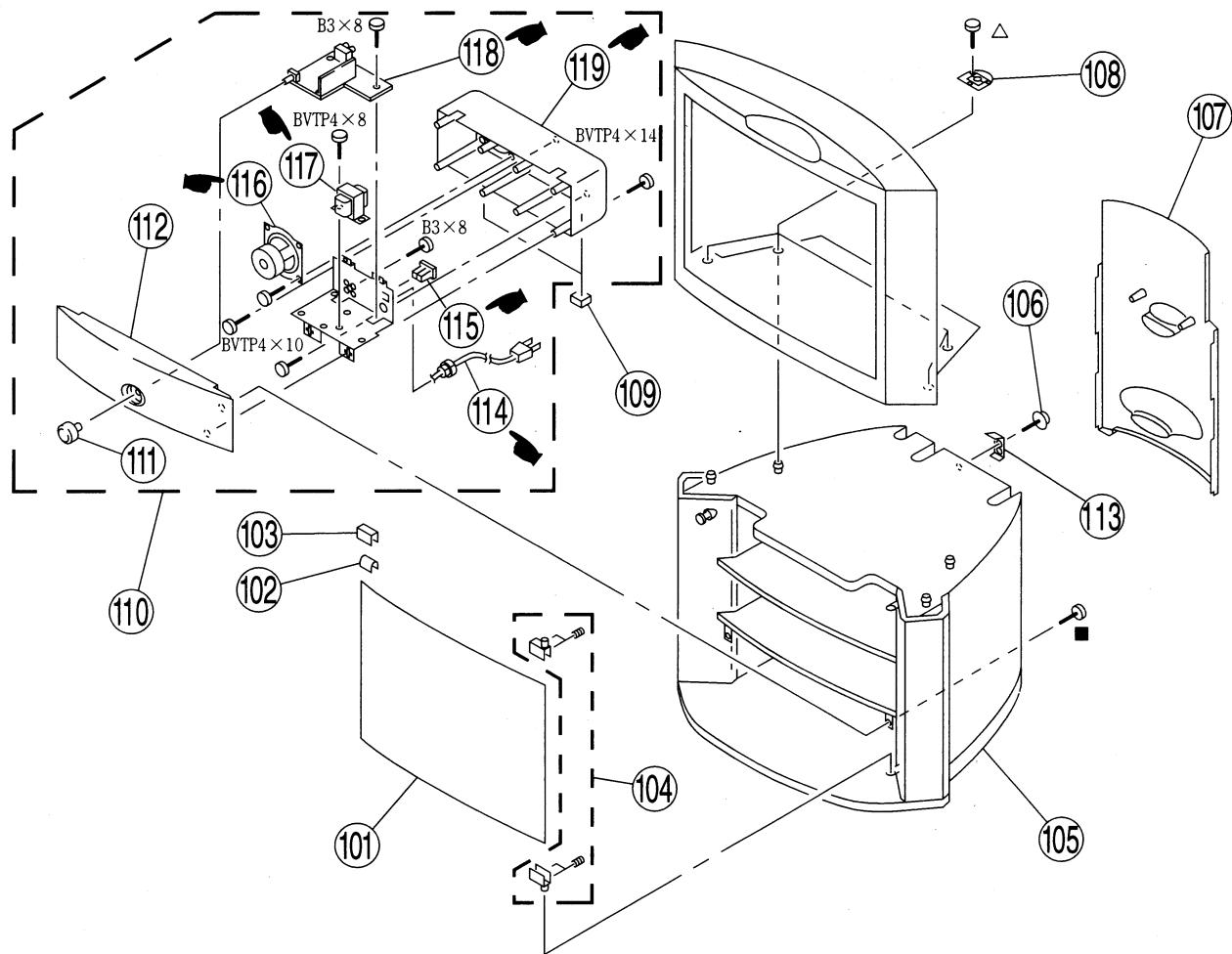


5-3. CABINET BASE [KV-32XBR85]

△ : 7-685-661-14 +BVTP 4X12
 ■ : 7-685-663-79 +BVTP 4X16

The components identified by shading and mark △ are critical for safety.
 Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité.
 Ne les remplacer que par une pièce portant le numéro spécifié.



REF. NO.	PART NO.	DESCRIPTION	REMARK
101	4-049-526-01	DOOR, GLASS	
102	2-352-981-01	SPACER	
103	2-359-505-01	RETAINER, MAGNET	
104	4-049-536-01	HINGE SET	
105	* X-4032-888-1	BASE ASSY, CABINET	
106	4-041-164-11	SCREW (4X20), TAPPING	
107	4-048-245-01	PANEL, BACK	
108	X-4032-889-1	CLAMP ASSY	
109	4-049-527-01	FOOT, WOOFER	
110	1-550-910-21	WOOFER, ACTIVE SUPER	111, 112, 114-119

REF. NO.	PART NO.	DESCRIPTION	REMARK
111	4-048-244-01	KNOB, WOOFER	
112	4-048-246-01	COVER, WOOFER	
113	4-049-530-01	BRACKET, RIGHT	
114	4-904-750-01	CORD, POWER	
115	4-904-750-01	AC OUTLET	
116	9-900-278-01	SPEAKER	
117	9-900-751-01	TRANSFORMER	
118	9-904-754-01	AMP KIT(TWY1019-A)	
119	9-904-744-01	CABINET	

6. ELECTRICAL PARTS LIST

The components identified by shading and mark ! are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ! sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	* A-1331-264-A	SUPER WOOFER BOARD, COMPLETE (KV-32XBR85 only)					
<CAPACITOR>							
C001	1-102-114-00	CERAMIC	470PF 10% 50V		Q001	8-729-140-96	TRANSISTOR 2SD774-34
C002	1-102-114-00	CERAMIC	470PF 10% 50V		Q002	8-729-119-78	TRANSISTOR 2SC2785-HEF
C003	1-124-903-11	ELECT	1MF 20% 50V		Q003	8-729-119-76	TRANSISTOR 2SA1175-HEF
C004	1-124-903-11	ELECT	1MF 20% 50V		Q004	8-729-119-76	TRANSISTOR 2SA1175-HEF
C005	1-130-494-11	FILM	0.082MF 5% 50V		<TRANSISTOR>		
C006	1-130-490-11	FILM	0.039MF 5% 50V		R001	1-249-405-11	CARBON 100 5% 1/4W
C007	1-130-494-11	FILM	0.082MF 5% 50V		R002	1-249-405-11	CARBON 100 5% 1/4W
C008	1-130-490-11	FILM	0.039MF 5% 50V		R003	1-249-426-11	CARBON 56K 5% 1/4W
C009	1-124-903-11	ELECT	1MF 20% 50V		R004	1-249-426-11	CARBON 56K 5% 1/4W
C010	1-124-903-11	ELECT	1MF 20% 50V		R005	1-247-862-11	CARBON 20K 5% 1/4W
C011	1-102-973-00	CERAMIC	100PF 10% 50V		R006	1-247-862-11	CARBON 20K 5% 1/4W
C012	1-124-903-11	ELECT	1MF 20% 50V		R007	1-247-862-11	CARBON 20K 5% 1/4W
C013	1-124-908-11	ELECT	0.47MF 20% 50V		R008	1-247-862-11	CARBON 20K 5% 1/4W
C014	1-124-907-11	ELECT	10MF 20% 50V		R009	1-247-862-11	CARBON 20K 5% 1/4W
C015	1-124-910-11	ELECT	47MF 20% 50V		R010	1-247-862-11	CARBON 20K 5% 1/4W
C016	1-124-472-11	ELECT	470MF 20% 10V		R011	1-249-431-11	CARBON 15K 5% 1/4W
C017	1-124-472-11	ELECT	470MF 20% 10V		R012	1-249-413-11	CARBON 470 5% 1/4W
C018	1-124-120-11	ELECT	220MF 20% 25V		R013	1-247-864-11	CARBON 24K 5% 1/4W
C019	1-124-120-11	ELECT	220MF 20% 25V		R014	1-247-864-11	CARBON 24K 5% 1/4W
C020	1-102-074-00	CERAMIC	0.001MF 10% 50V		R015	1-247-864-11	CARBON 24K 5% 1/4W
C021	1-130-491-00	FILM	0.047MF 5% 50V		R016	1-247-864-11	CARBON 24K 5% 1/4W
C022	1-130-491-00	FILM	0.047MF 5% 50V		R017	1-249-417-11	CARBON 1K 5% 1/4W
C023	1-124-360-00	ELECT	1000MF 20% 16V		R018	1-249-429-11	CARBON 10K 5% 1/4W
C024	1-124-360-00	ELECT	1000MF 20% 16V		R019	1-247-903-91	CARBON 1M 5% 1/4W
C025	1-124-636-91	ELECT	3300MF 20% 25V		R020	1-249-426-11	CARBON 5.6K 5% 1/4W
C026	1-124-472-11	ELECT	470MF 20% 10V		R021	1-249-417-11	CARBON 1K 5% 1/4W
C027	1-124-472-11	ELECT	470MF 20% 10V		R022	1-249-429-11	CARBON 10K 5% 1/4W
C028	1-124-472-11	ELECT	470MF 20% 10V		R023	1-249-429-11	CARBON 10K 5% 1/4W
C029	1-124-907-11	ELECT	10MF 20% 50V		R024	1-249-417-11	CARBON 1K 5% 1/4W
C030	1-102-112-00	CERAMIC	0.01MF 10% 50V		R025	1-247-839-11	CARBON 2.2K 5% 1/4W
<CONNECTOR>							
CN001	9-904-761-01	PIN, TERMINAL			R026	1-249-429-11	CARBON 10K 5% 1/4W
<DIODE>							
D001	9-904-756-01	DIODE RDA-402LP-A			R027	1-249-417-11	CARBON 1K 5% 1/4W
D001	9-904-756-01	DIODE RDA-15-12VLT			R028	1-247-903-91	CARBON 1M 5% 1/4W
D003	9-904-766-01	DIODE RD9R1ES(B2)-T			R029	1-249-433-11	CARBON 22K 5% 1/4W
D004	9-904-766-01	DIODE RD9R1ES(B2)-T			R030	1-249-440-11	CARBON 82K 5% 1/4W
D005	8-719-802-30	DIODE 1SS176			R031	1-249-433-11	CARBON 22K 5% 1/4W
D006	8-719-802-30	DIODE ISS176			R032	1-247-839-11	CARBON 2.2K 5% 1/4W
<FUSE>							
J001	9-904-752-01	FUSE GLASS TUBE 1A/25V 20MM			R033	1-249-433-11	CARBON 22K 5% 1/4W
<IC>							
IC001	9-904-756-01	IC NJM2068S			R034	1-249-429-11	CARBON 10K 5% 1/4W
IC002	9-904-756-01	IC NJM2068S			R035	1-249-429-11	CARBON 10K 5% 1/4W
IC003	9-904-756-01	IC NJM2068S			R036	1-249-433-11	CARBON 22K 5% 1/4W
IC004	9-904-757-01	IC M5233L			R037	1-249-417-11	CARBON 1K 5% 1/4W
IC005	9-904-755-01	IC TA8225L(PAO-K)			R038	1-249-866-11	CARBON 30K 5% 1/4W
<JACK>							
J001	9-904-759-01	RCA JACK			R039	1-249-405-11	CARBON 100 5% 1/4W
<VARIABLE RESISTOR>							
VR001	9-904-760-01	VOLUME			R040	1-247-842-11	CARBON 3K 5% 1/4W
<WIRE>							
R041	9-904-405-11	CARBON 100 5% 1/4W			R041	1-249-405-11	CARBON 100 5% 1/4W
R042	1-247-842-11	CARBON 3K 5% 1/4W			R042	1-247-842-11	CARBON 3K 5% 1/4W
R043	9-904-764-01	METAL OXIDE 1 5% 1/2W			R043	9-904-764-01	METAL OXIDE 1 5% 1/2W
R044	9-904-764-01	METAL OXIDE 1 5% 1/2W			R044	9-904-764-01	METAL OXIDE 1 5% 1/2W
R045	9-904-762-01	METAL OXIDE 10 5% 1/4W			R045	9-904-762-01	METAL OXIDE 10 5% 1/4W
<WIRE>							
R046	9-904-763-01	METAL OXIDE 1.8K 5% 1/2W			R046	9-904-763-01	METAL OXIDE 1.8K 5% 1/2W
R047	9-904-763-01	METAL OXIDE 10K 5% 1/4W			R047	9-904-763-01	METAL OXIDE 10K 5% 1/4W
R048	1-249-429-11	CARBON 10K 5% 1/4W			R048	1-249-429-11	CARBON 10K 5% 1/4W
R049	1-249-429-11	CARBON 10K 5% 1/4W			R049	1-249-429-11	CARBON 10K 5% 1/4W

ADJUSTMENT MANUAL

AA - 1A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-27XBR45	RM-Y127	US	SCC-H81A-A	KV-32XBR45	RM-Y127	US	SCC-H81B-A
KV-27XBR45	RM-Y127	Canadian	SCC-H82A-A	KV-32XBR45	RM-Y127	Canadian	SCC-H82B-A
KV-27XBR45M	RM-Y127	E	SCC-H83A-A	KV-32XBR85	RM-Y127	US	SCC-H81C-A

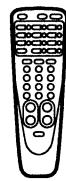
Note :

- Service Manual for this model and Service Manual of MDR-IF210 are separately published.

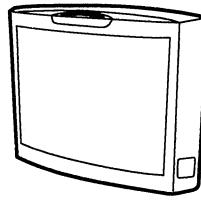
	Service Manual	MDR-IF210 Service Manual
Part No.	9-965-063-01	9-959-113-11



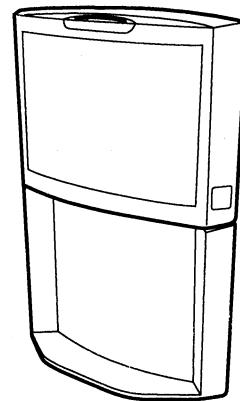
MDR-IF210



RM-Y127



KV-27XBR45
KV-27XBR45M
KV-32XBR45



KV-32XBR85



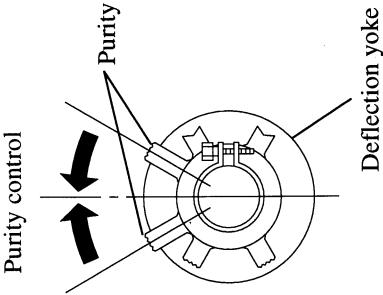
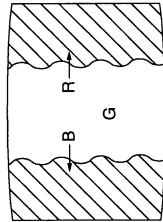
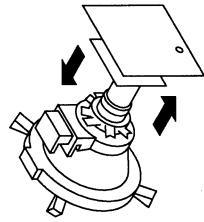
* Please file according to model size. ■

TRINITRON® COLOR TV
SONY®

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SET-UP ADJUSTMENTS

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<ul style="list-style-type: none"> The following adjustments should be made when a complete realignment is required or a new picture tube is installed. These adjustments should be performed with rated power supply voltage unless otherwise noted. 				  
<p>The controls and switch should be set as follows unless otherwise noted :</p> <p>PICTURE control normal BRIGHTNESS control normal</p> <p>Preparation:</p> <ul style="list-style-type: none"> Feed in the white pattern signal. 	Color bar Pattern Generator		<p>BEAM LANDING</p> <ol style="list-style-type: none"> Input a *raster signal with the pattern generator. Loosen the deflection yoke mounting screw, and set the *purity control to the center. Turn the *raster signal of the pattern generator to green. Move the *deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. Move the deflection yoke forward, and adjust so that the entire screen becomes green. 	*White Pattern *Purity Control *Green Pattern *Deflection Yoke *D

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>6. Switch over the raster signal to red and blue and confirm the condition.</p> <p>7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.</p> <p>8. When landing at the corner is not right, adjust by using the *disk magnets.</p>				<p>*Disk Magnets</p>
				<p>CONVERGENCE</p> <p>Preparation:</p> <ul style="list-style-type: none"> ● Before starting, perform FOCUS, V. LIN and V. SIZE adjustments. ● Set BRIGHTNESS control to minimum. ● Feed in *signal. <p>(1) Horizontal and Vertical Static Convergence Adjustment</p> <ol style="list-style-type: none"> 1. Adjust *magnet to convergence red, green and blue dots in the center of the screen. (Vertical movement) <p>*V. STAT Magnet</p> <p>*V. STAT Magnet</p> <p>● Tilt the *magnet and adjust static convergence to open or close the *magnet.</p>

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
2. When the *magnet is moved in the direction of arrow ③ and ⑥, red, green and blue dots move as shown below.			<p>*V. STAT Magnet</p> <p>*BMC Magnet</p> <p>*PICTURE</p>	<ul style="list-style-type: none"> Operation of *Magnet <ul style="list-style-type: none"> The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking. Use the V STAT tabs to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction). Y separation axis correction magnet adjustment <ul style="list-style-type: none"> 1. Receive a *signal, and adjust *PICTURE and BRIGHTNESS. 2. Adjust the deflection yoke to the upright condition when it hits the CRT. 3. Adjust so that the Y separation Axis correction magnet on the neck assembly is symmetrical at the top and bottom (open state). 4. Return the deflection yoke to its original position. <p>..... minimum BRIGHTNESS normal</p>

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
(2) Dynamic Convergence Adjustment Preparation: <ul style="list-style-type: none"> ● Before starting perform Horizontal and Vertical static convergence Adjustment. <ol style="list-style-type: none"> 1. Slightly loosen deflection yoke spacers. 2. Remove deflection yoke spacers. 3. Move the *deflection yoke for best convergence as shown below. 4. Tighten the deflection yoke screw. 5. Install the deflection yoke spacers. 			*Deflection Yoke	
(3) Dynamic Convergence Adjustment (32 inch only) SERVICE MODE PROCEDURE				<p>SERVICE ADJUSTMENT MODE IN</p> <p>Disp. Item (Item) data</p> <p>SERVICE AFC 0 1000 0</p> <p>SERVICE ADJUSTMENT MODE MEMORY</p> <p>MUTING Green ENTER Red</p> <p>SERVICE WRITE 0 1000 0</p> <p>SERVICE RESET 0 1000 0</p> <p>Factory original setting</p>

(2) Dynamic Convergence Adjustment

Preparation:

● Before starting perform Horizontal and Vertical static convergence Adjustment.

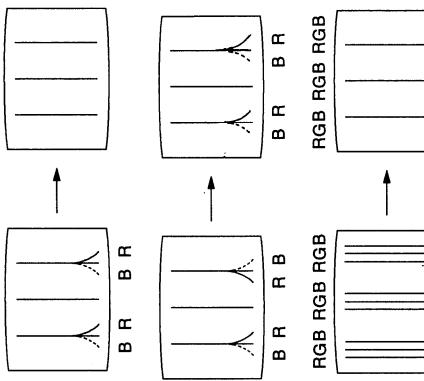
1. Slightly loosen deflection yoke spacers.
2. Remove deflection yoke spacers.
3. Move the *deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

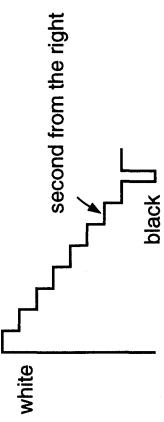
(3) Dynamic Convergence Adjustment (32 inch only)

SERVICE MODE PROCEDURE

1. Standby mode. (Power off)
2. **DISPLAY** → **5** → **VOL(+)** → **POWER** on the *Remote Commander. Press each button within a second.
3. The CRT display the item Being adjusted.
4. Press **1** or **4** on the Remote Commander to select the item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **MUTING** then **ENTER** to write into memory.
7. Press **8** then **ENTER** on the Remote Commander to initialize.
8. Turn set off and on to exit.

ADJUSTMENT ITEM AND PROCEDURE				EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
No.	Disp.	Item	Ave. Data				
59	UYBO	Upper Y-Bow	40				
60	LYBO	Lower Y-Bow	22				
61	HAMP	H. Amp	34				
62	HTIL	H. Tilt	34				
63	UCBO	Upper Corner-Bow	26				
64	UTIL	Upper Tilt	31				
65	LCBO	Lower Corner-Bow	45				
66	LTL	Lower Tilt	30				
67	DCSH	DC Shift	36				
Upper Y-Bow							
Lower Y-Bow							
H. Amp							
H. Tilt							
Upper Corner-Bow							
Upper Tilt							
UYBO				B R B R			
LYBO				B R B R			
HAMP				R B R B			
HTILT				R B R B			
UCBO				B R B R			
UTIL				B R B R			

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
Lower Corner-Bow			LCBO	
Lower Tilt		LTL		
DC Shift		DCSH		
(4) Screen-corner Convergence Adjustment				
a-b : screen-corner misconvergence			Affix a Permalloy ass'y corresponding to the misconverged areas	
FOCUS			Adjust *FOCUS control for best picture.	
SCREEN (G2)			*Dot pattern	
1. Input a *signal. 2. Adjust *PICTURE, BRIGHTNESS controls. 3. Adjust S BRT, G CUT, B CUT in service mode so that voltages on the red, green and blue *cathodes are *Voltage with an oscilloscope. 4. Observe the screen and adjust *SCREEN (G2)VR to obtain the faintly visible background of dot signal.			*cathodes	
Oscilloscope			Oscilloscope	
*PICTURE normal *BRIGHTNESS normal *S BRT normal *G CUT normal *B CUT normal *RV702 normal				
*170±2V DC				
170±2V DC				
pedestal				
SCREEN (G2)				
GND				

ADJUSTMENT ITEM AND PROCEDURE		EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER																																			
WHITE BALANCE ADJUSTMENTS		<table border="1"> <thead> <tr> <th>No.</th> <th>Disp.</th> <th>Item</th> <th>27 inch</th> <th>Ave. Data</th> </tr> </thead> <tbody> <tr> <td>20</td> <td>GAMP</td> <td>Green Drive</td> <td>37</td> <td>32 inch</td> </tr> <tr> <td>21</td> <td>BAMP</td> <td>Blue Drive</td> <td>46</td> <td>38</td> </tr> <tr> <td>22</td> <td>GCUT</td> <td>Green Cut-off</td> <td>6</td> <td>43</td> </tr> <tr> <td>23</td> <td>BCUT</td> <td>Blue Cut-off</td> <td>10</td> <td>6</td> </tr> <tr> <td>27</td> <td>SBRT</td> <td>Sub Brightness</td> <td>20</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>17</td> </tr> </tbody> </table>	No.	Disp.	Item	27 inch	Ave. Data	20	GAMP	Green Drive	37	32 inch	21	BAMP	Blue Drive	46	38	22	GCUT	Green Cut-off	6	43	23	BCUT	Blue Cut-off	10	6	27	SBRT	Sub Brightness	20	5					17	<ul style="list-style-type: none"> *Entire White Pattern 	<ol style="list-style-type: none"> 1. Input a *signal. 2. Set to service adjustment mode. 3. Set the PICTURE and BRIGHTNESS to *adjustment. 4. Adjust with *S BRT if necessary. 5. Select *G CUT and *B CUT with [1] and [4]. 6. Adjust with [2] and [5] for the best white balance. 7. Set the *PICTURE and BRIGHTNESS to *adjustment. 8. Select *G AMP and B AMP with [1] and [4]. 9. Adjust with [3] and [6] for the best white balance. 10. Write into the memory by pressing [MUTING] then [ENTER]. 	<p>*PICTURE minimum maximum BRIGHTNESS</p> <p>*S BRT minimum maximum</p> <p>*G CUT *B CUT</p> <p>*PICTURE maximum minimum BRIGHTNESS</p> <p>*G AMP B AMP</p> <p>SUB BRIGHT ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Set to service adjustment mode. 2. Input a *signal. 3. Select SBRT with [1] and [4], and adjust SUB BRIGHT level with [3] and [6] so that the stripe second from the right is dimly lit. 4. Write into the memory by pressing [MUTING] then [ENTER]. <p>*PICTURE minimum normal SBRT</p> 
No.	Disp.	Item	27 inch	Ave. Data																																				
20	GAMP	Green Drive	37	32 inch																																				
21	BAMP	Blue Drive	46	38																																				
22	GCUT	Green Cut-off	6	43																																				
23	BCUT	Blue Cut-off	10	6																																				
27	SBRT	Sub Brightness	20	5																																				
				17																																				
WHITE BALANCE ADJUSTMENTS																																								

CIRCUIT ADJUSTMENTS

ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

Use of Remote Commander (RM-Y127) can be performed circuit adjustments about this model.

NOTE : Test Equipment Required.

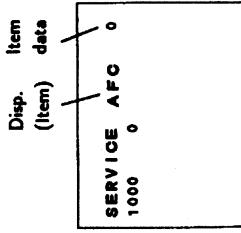
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC

1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

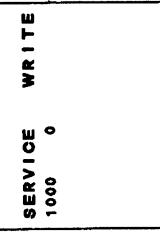
1. Standby mode. (Power off)
2. **[DISPLAY] → [5] → [VOL(+)] → [POWER]** on the Remote Commander. (Press each button within a second.)

SERVICE ADJUSTMENT MODE IN



2. MEMORY WRITE CONFIRMATION METHOD

Carry out step 8) when adjusting IDs 0 to 4 and when replacing and adjusting IC102.



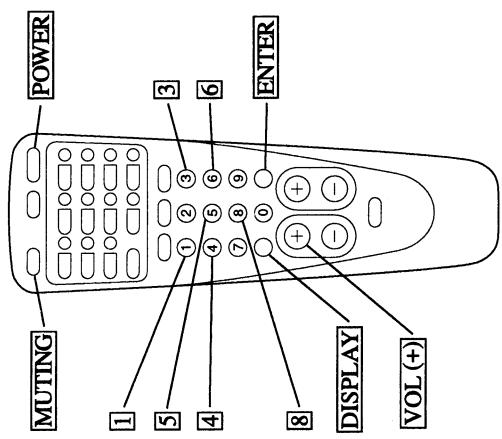
Factory original setting

8. Press **[8]** then **[ENTER]** on the Remote Commander to initialize.

1. After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again, confirm they were adjusted.

9. Turn set off and on to exit.
3. The CRT displays the item Being adjusted.
4. Press **[1]** or **[4]** on the Remote Commander to select the item.
5. Press **[3]** or **[6]** on the Remote Commander to change the data.
6. If you want to recover the latest values press **[0]** then **[ENTER]** to lead the memory.
7. Press **MUTING** then **[ENTER]** to write into memory.

3. ADJUST BUTTONS AND INDICATOR



RM-Y127

No.	Disp.	Item	Data range	Ave. data
19	G2AJ	G2 ADJUSTMENT	0-15	*0
20	GAMP	GREEN DRIVE	0-63	37
21	BAMP	BLUE DRIVE	0-63	46
22	GCUT	GREEN CUT OFF	0-15	6
23	BCUT	BLUE CUT OFF	0-15	10
24	SPIX	SUB CONTRAST	0-15	9
25	SHUE	SUB HUE	0-15	7
26	SCOL	SUB COLOR	0-15	6
27	SBRT	SUB BRIGHTNESS	0-63	20
28	SSHP	SUB SHARPNESS	0-3	*3
29	GMMA	GAMMA LEVEL	0-15	*12
30	DPIX	DYNAMIC PICTURE	0-3	*3
31	Y-DC	DC TRANSFER	0-3	*3
32	ABLM	AUTO BRIGHTNESS	0-3	*2
33	R-YR	R-Y AXIS	0-15	*8
34	R-YB	R-Y AXIS	0-15	*4
35	G-YR	G-Y AXIS	0-15	*9
36	G-YB	G-Y AXIS	0-15	*13
37	CTRIP	COLOR TRAP	0-1	*1
38	TOTP	CHROMA TOT POINT	0-3	*0
39	TOTQ	CHROMA TOT WIDTH	0-3	*1
40	PREL	PRE/OVER SHOOT	0-15	*4
41	SHPF	SHARP FREQ	0-3	*1
42	SHPL	SHARPNESS LIMITER	0-1	*0
43	ROFF	RED OUT	0-1	*1
44	GOFF	GREEN OUT	0-1	*1
45	BOFF	BLUE OUT	0-1	*1
46	OSDL	OSD LEVEL	0-3	*2
47	MSYL	VERTICAL SYNC	0-1	*0
48	VMLV	VM LEVEL	0-3	*3
49	NRLV	NOISE REDUCTION	0-3	*1
50	DCOL	DYNAMIC COLOR	0-1	*1
51	DISP	ON SCREEN DISPLAY POSITION	0-63	36
52	SVOL	SUB VOLUME	0-15	*0
53	SBAL	SUB BALANCE	0-15	*7
54	SBAS	SUB BASS	0-15	*8
55	STRE	SUB TREBLE	0-15	*8
56	BBEL	BBE LOW	0-15	*15
57	BBEH	BBE HIGH	0-15	*0
58	BBESET	BBE OFFSET	0-15	*5
59	UYBO	UPPER Y BOW	0-63	NA
60	LYBO	LOWERY BOW	0-63	NA
61	HAMP	H AMPLITUDE	0-63	NA
62	HTILT	H TILT	0-63	NA
63	UCBO	UPPER CORNER BOW	0-63	NA
64	UTIL	UPPER TILT	0-63	NA
65	LCBO	LOWER CORNER BOW	0-63	NA
66	LTLT	LOWER TILT	0-63	NA
67	DCSH	DL SHIFT	0-63	NA
68	PHPO	PIP H POSITION	0-127	70
69	PHUE	PIP HUE	0-63	*0
70	QVPO	PIP V POSITION	0-63	13
71	VPDL	PIP V PULSE DELAY	0-31	*6
72	MCON	MAIN CONTRAST	0-127	*4

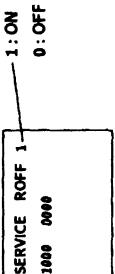
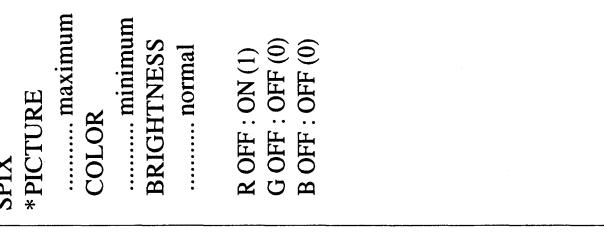
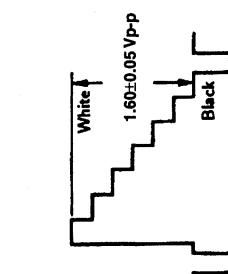
No.	Disp.	Item	Data range	Ave. data
73	ICON	INSET CONTRAST	0-15	*4
74	FRMY	FRAME Y LEVEL	0-15	*10
75	MPER	MAIN R-Y LEVEL	0-15	0
76	MPB	MAIN B-Y LEVEL	0-15	0
77	IPEB	INSET R-Y LEVEL	0-15	0
78	IPEB	INSET B-Y LEVEL	0-15	0
79	BLDL	BLANKING DELAY	0-15	*15
80	BKON	BACKGROUND	0-1	*0
81	ID0	SET 1D 0	0-127	*120
82	ID1	SET 1D 1	0-127	*127
83	ID2	SET 1D 2	0-127	*126
84	ID3	SET 1D 3	0-127	*52
85	ID4	SET 1D 4	0-127	*28

* : FIX
Note : No. From 1 to 85 is to show adjustment order.

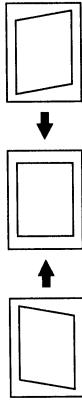
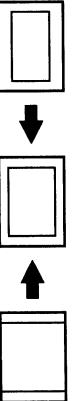
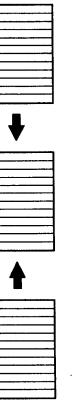
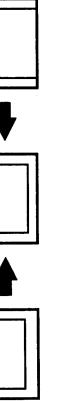
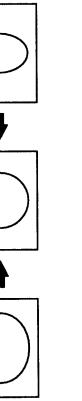
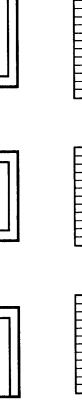
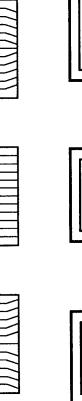
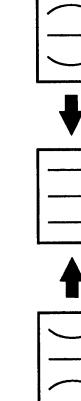
SERVICE	ID	0 120
1000	0	1000 0000

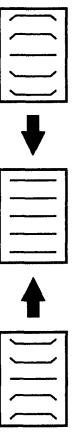
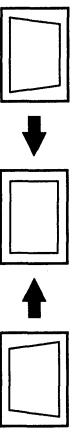
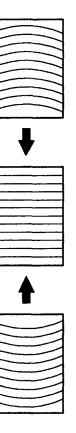
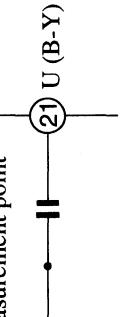
Please adjust the function values as shown below
when IC 102 on M board was replaced.

No.	Disp.	Item	Data range	Ave. data
1	PJUTV	PJUTV	0-1	*0
2	V-POSITION	V-POSITION	0-63	42
3	V-SIZE	V-SIZE	0-63	34
4	V-ZOOM	H-ZOOM	0-15	*4
5	V-LIN	V-LINEARITY	0-15	9
6	VSCO	V-S CORRECTION	0-15	4
7	H-POSITION	H-POSITION	0-63	33
8	HSIZ	H-SIZE	0-63	30
9	HZOM	H-ZOOM	0-15	*2
10	PAMP	PIN AMPLITUDE	0-63	28
11	UPIN	UPPER PIN	0-15	6
12	LPIN	LOWER PIN	0-15	4
13	PPHA	PIN PHASE	0-15	10
14	VBOW	VERTICAL BOW	0-15	8
15	VANG	VERTICAL ANGLE	0-15	5
16	AFCG	AUTO FREQ	0-3	*1
17	AKRF	REF PULSE POS	0-15	*10
18	G2SW	G2 SWITCH	0-1	*0

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
A BOARD				
RF AGC (IF BLOCK VR)	*Color-Bar Pattern			<p>*AGC (TU101) (TU102)</p> 
M BOARD				<p>SPIX *PICTURE</p> <p>..... maximum COLOR minimum BRIGHTNESS normal</p> <p>R OFF : ON (1) G OFF : OFF (0) B OFF : OFF (0)</p> 
SUB CONTRAST	*Color-bar			<p>*TP47R (RED OUT)</p> <p>(C Board)</p>
				<p>*Oscilloscope</p> <p>4. Connect an *oscilloscope to *TP47B (R OUT) of C board and ground.</p> <p>5. Select SPIX with [1] and [4].</p> <p>6. Adjust with [3] and [6].</p> <p>7. Write the memory by pressing MUTING then ENTER.</p> <p>8. Return the *following back to normal after *adjustment.</p> 

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
ON SCREEN DISPLAY POSITION	*Color-bar pattern	DIPS		
SUB BRIGHTNESS	*Cross-hatch pattern	SBRT		<p>*PICTURE minimum BRIGHTNESS minimum</p>
SUB HUE, SUB COLOR	<ul style="list-style-type: none"> 1. Input a *signal. 2. Set to Service adjustment Mode. 3. Select DISP with [1] and [4]. 4. Adjust with [3] and [6] for the bar center. 5. Write the memory by pressing MUTING then ENTER. <p>TP47B</p> <p>Oscilloscope</p> <p>TP47B(B OUT) of C board.</p> <p>Select SHUE and SCOL with [1] and [4].</p> <p>Adjust with [3] and [6] for the V1=V4 and V2=V3.</p> <p>Write into the memory by pressing MUTING then ENTER.</p>	<p>V1 V2 V3 V4</p> 	<p>SHUE SCOL</p>	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
V-ANGLE	*Cross-hatch or Mono scope		VANG	
V-SIZE			VSIZE	
UPPER PIN			UPIN	
V-POSITION			VPOS	
H-SIZE			HSIZ	
H-POSITION			HPOS	
LOWER PIN			LPIN	
V LINEARITY			VLIN	
V-S CORRECTION			VSCO	
PIN AMP			PAMP	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
CORNER PIN			CPIN	
PIN PHASE			PPHA	
V. BOW			VBOW	
PA BOARD		<p>*Color-bar pattern</p> <p>*Oscilloscope</p> <p>*Pin ② of IC3205(MAIN) Pin ② of IC3208(SUB)</p>		
SUB HUE BARANCE		<p>*Color-bar</p> <p>*Pin ② of IC3205</p>		
P IN P H. POSITION (PHPO)		<p>PHPO</p> <p>Measurement point </p>		
<ol style="list-style-type: none"> 1. Input a *signal. 2. Set to P&P(MAIN&SUB) Mode. 3. Connect an *oscilloscope *IC Pins of PA board. 4. Adjust RV3201 so that the simller waveform. 5. Adjust P IN P put at lower right position. 6. Write the memory by Pressing MUTING then ENTER 				

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Consumer A&V Products Company
TV & Display Products Div.

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ADJUSTMENT MANUAL

AA-1A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-27XBR45	RM-Y127	US	SCC-H81A-A	KV-32XBR45	RM-Y127	US	SCC-H81B-A (Serial No. 7,038,538 and later)
KV-27XBR45	RM-Y127	Canadian	SCC-H82A-A	KV-32XBR45	RM-Y127	Canadian	SCC-H82B-A (Serial No. A,701,501 and later)
KV-27XBR45M	RM-Y127	E	SCC-H83A-A	KV-32XBR85	RM-Y127	US	SCC-H81C-A (Serial No. 7,009,901 and later)

SUPPLEMENT-1

SUBJECT: SERVICE DATA CHANGE

File this supplement with the Service manual.

INTRODUCTION: DYNAMIC CONVERGENS FREE.(KV-32XBR45/85 only)

4. AN ITEM OF ADJUSTMENTS (See page 11)

No.	Disp.	Item	Data range	Ave. data	
				27 inch	32 inch
1	PJTV	PJ/CTV	0-1	*0	*0
2	VPOS	V-POSITION	0-63	42	37
3	VSIZ	V-SIZE	0-63	34	19
4	VZOM	V-ZOOM	0-15	*4	*6
5	VLIN	V-LINEARITY	0-15	9	10
6	VSCO	V-S CORRECTION	0-15	4	8
7	HPOS	H-POSITION	0-63	33	34
8	HSIZ	H-SIZE	0-63	30	27
9	HZOM	H-ZOOM	0-15	*0	*0
10	PAMP	PIN AMPLITUDE	0-63	28	22
11	UPIN	UPPER PIN	0-15	6	9
12	LPIN	LOWER PIN	0-15	4	7
13	PPHA	PIN PHASE	0-15	10	10
14	VBOW	VERTICAL BOW	0-15	8	9
15	VANG	VERTICAL ANGLE	0-15	5	11
16	AFCG	AUTO FREQ	0-3	*1	*1
17	AKRF	REF PULSE POS	0-15	*10	*10
18	G2SW	G2 SWITCH	0-1	*0	*0

[Change data]



9-965-064-81

※ Please file according to model size.

27 32

Sony Corporation
Display Company
Quality Engineering Dept.

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